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# Final Supplemental Environmental Impact Statement

## Southern California National Forests Land Management Plan Amendment

Angeles National Forest  
Cleveland National Forest  
Los Padres National Forest  
San Bernardino National Forest

Kern, Los Angeles, Orange, Riverside, San Diego, San Luis Obispo, Santa Barbara,  
San Bernardino, and Ventura Counties, California



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**Final Supplemental  
Environmental Impact Statement  
Southern California National Forests  
Land Management Plan Amendment**

**Kern, Los Angeles, Orange, Riverside, San Diego, San Luis Obispo, Santa Barbara, San Bernardino, and Ventura Counties, California**

**Lead Agency:** USDA Forest Service

**Cooperating Agencies:** State of California Natural Resources Agency  
US Fish and Wildlife Service  
US National Marine Fisheries Service  
US Environmental Protection Agency  
Orange County Fire Authority  
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**Abstract:** This supplemental statement describes four alternative land use zone allocations for 35 inventoried roadless areas, along with three alternative monitoring strategies. Alternatives 2, 2a, and 3 would apply more restrictive land use zones and increase recommended wilderness allocations than currently is allocated as described in Alternative 1. Alternative 2A, the Preferred Alternative, was developed in response to comments on the Draft SEIS. In addition, new monitoring protocols are proposed. Alternative B is the preferred Monitoring Alternative.

The effects analysis concludes that allocating more of the study area to restrictive land use zones would benefit resources such as watershed, wildlife, and dispersed recreation by limiting future activities. The suitable area available for development of roads, developed recreation, special uses, and energy developments would decrease. No change is expected for grazing. Management for the reduction of hazardous fuels would likely shift from mechanized treatments to less intensive treatments, particularly in recommended wilderness areas. There would be no effects on fire suppression, law enforcement or other emergency response for the proposed action, and limited effects under Alternative 3 related to reduced road access.

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## Summary

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The Angeles, Cleveland, Los Padres and San Bernardino National Forests propose to amend their respective Land Management Plans (LMPs) as they relate to roadless area management and to monitoring. The Regional Forester approved LMPs for the four forests in 2006. Those LMPs allocated lands within Inventoried Roadless Areas (IRAs) to various Land Use Zones (LUZs) based on wilderness evaluations that were completed as part of the environmental review.

This proposed LMP amendment is a result of the Settlement Agreement approved January 3, 2011 as the remedy for two lawsuits challenging the revised LMPs (California Resources Agency, et al vs. United States Department of Agriculture, and Center for Biological Diversity, et al vs. United States Department of Agriculture).

Scoping began with the publication of the Notice of Intent on April 27, 2012 and concluded on June 11, 2012. The four forests held nine public meetings with over 250 people attending. Over 10,000 comments were received during the scoping period.

The proposed action identified 80,000 acres of Recommended Wilderness in four new recommended wilderness areas. The proposed action also added approximately 300,000 acres of proposed Back Country Non-Motorized areas on the Los Padres National Forest. Existing motorized roads and trails were retained by developing road and trail corridors within the proposed non-motorized areas. An alternative monitoring strategy based on the current strategy was also proposed.

Scoping identified a wide range of issues related to resource management, access, commodities, recreation, wildfire, and wilderness designation. These issues led the agency to develop alternatives to the proposed action including:

- Alternative 3 – Recommended Wilderness Emphasis – this alternative allocates a larger share of the IRAs to the recommended wilderness land use zone.
- Alternative C – Extensive Monitoring – this alternative proposes more extensive monitoring, including the use of a sampling approach for baseline surveys.

The effects analysis concludes that allocating more of the study area to restrictive land use zones would benefit resources such as watershed, wildlife, and dispersed recreation by limiting future activities. The suitable area available for development of roads, developed recreation, special uses, and energy developments would decrease. No change is expected for grazing. Management for the reduction of hazardous fuels would likely shift from mechanized treatments to less intensive treatments, particularly in recommended wilderness areas. There would be no effects on fire suppression, law enforcement or other emergency response for the proposed action, and limited effects under Alternative 3 related to reduced road access.

The Draft SEIS was released for public comment in February 2013. Over 11,000 comments were received by the close of comments on May 16, 2013. Based on these comments and new information, several corrections were made to Alternative 2. These include small adjustments in the LUZ boundaries to exclude a utility corridor in the West Fork IRA and a portion of a permitted ski area facility in the Cucamonga B IRA.

A new Alternative, Alternative 2a, the Preferred Alternative, was developed that slightly modifies Alternative 2 based on comments and new information. The focused changes are located within the Black Mountain, Salt Creek, Fish Canyon, Raywood Flat, No Name, and Sill Hill IRAs and the Upper San Diego River and Cedar Creek Undeveloped Areas. All other aspects of Alternative 2a are the same as Alternative 2. The scope of Alternative 2a is within the scope of actions analyzed in the Draft SEIS.

The proposed monitoring strategy is within the agency budget and would meet the agency requirements. The extensive monitoring alternative exceeds agency requirements and current budget levels and can only be implemented if public services are reduced.

Based upon the effects of the alternatives, the responsible officials will decide if the plans should be amended, and if so what land use allocations and monitoring strategies will be applied.

## Table of Contents

Summary .....	iii
<b>Chapter 1. Purpose of and Need for Action .....</b>	<b>1</b>
Document Structure .....	1
Background .....	2
Purpose and Need for Action.....	3
Proposed Action.....	3
Decision Framework .....	4
Public Involvement .....	4
Issues.....	5
Lead and Cooperating Agencies .....	12
Other Permits or Approvals.....	12
Other Related Efforts .....	13
<b>Chapter 2. Alternatives, Including the proposed action .....</b>	<b>15</b>
Introduction .....	15
Alternatives Considered in Detail.....	15
Land Use Zone Allocations.....	16
Monitoring and Evaluation Requirements .....	19
Agency Preferred Alternative.....	20
Features Common to All Alternatives .....	20
Alternatives Considered but Eliminated from Detailed Study .....	21
Comparison of Alternatives.....	24
<b>Chapter 3. Affected Environment.....</b>	<b>37</b>
Natural Resources Environment .....	44
Biological Resources .....	44
Vegetation Conditions .....	44
Wildlife .....	48
Botanical Resources.....	60
Invasive Non-native Species .....	69
Watershed.....	79
Air .....	85
Special Interest Areas .....	86
Social and Economic Environment.....	86

---

Heritage Resources.....	86
Tribal and Native American Interests.....	88
Recreation .....	91
Wilderness.....	97
Wild and Scenic Rivers .....	98
Landscape Management .....	100
Law Enforcement .....	104
Facility Operations and Maintenance.....	106
Roads .....	106
Non-Motorized Trails .....	108
Motorized Trails.....	109
Road and Trail Maintenance.....	110
Commodity and Commercial Uses .....	110
Livestock Grazing .....	110
Minerals and Energy.....	113
Non-Recreation Special Uses.....	116
Lands and Real Estate Management Activities.....	118
Private Lands.....	118
Wildland Fire and Community Protection.....	119
Fire History .....	119
Wildland/Urban Interface .....	120
Suppression Effectiveness and Firefighter Access.....	121
National Forest Management.....	122
Other Plans .....	123
Federal Plans .....	123
State Plans .....	124
County Plans .....	124
Monitoring.....	127
Part 1 Monitoring .....	128
Part 2 Monitoring .....	133
Part 3 Monitoring .....	133
<b>Chapter 4. Environmental Consequences.....</b>	<b>135</b>
Introduction .....	135



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Analysis assumptions.....	135
Management Direction.....	135
Land Use Zone Allocations .....	147
Natural Resources Environment .....	149
Biological Resources .....	149
Vegetation Conditions .....	149
Wildlife .....	150
Botanical Resources.....	180
Invasive Non-native Species .....	210
Watershed.....	216
Air .....	222
Special Interest Areas .....	223
Social and Economic Environment.....	225
Heritage Resources .....	225
Tribal and Native American Interests.....	228
Recreation .....	231
Wild and Scenic Rivers.....	238
Wilderness.....	241
Landscape Management.....	244
Law Enforcement .....	248
Economics .....	250
Facility Operations and Maintenance.....	251
Roads and Trails .....	251
Road and Trail Maintenance. ....	260
Commodity and Commercial Uses .....	261
Livestock Grazing.....	261
Minerals .....	264
Non-Recreation Special Uses.....	272
Lands and Real Estate Management Activities .....	278
Private Lands.....	278
Wildland Fire and Community Protection .....	279
Fire Suppression Effectiveness in IRAs, including WUI .....	279
Fuels Management.....	281

---

Impact on Local Fire Cooperators.....	283
Other Plans .....	284
Federal Plans .....	284
State Plans .....	284
County Plans .....	285
Short-term Uses and Long-term Productivity.....	285
Economic Efficiency .....	286
Unavoidable Adverse Effects .....	286
Irreversible and Irretrievable Commitments of Resources .....	286
Cumulative Effects.....	286
Vegetation.....	289
Wildlife .....	290
Botanical Resources .....	290
Invasive Non-native Species.....	291
Watershed .....	292
Air.....	292
Heritage Resources.....	293
Tribal and Native American Interests.....	294
Recreation .....	294
Wilderness.....	295
Landscape Management .....	301
Law Enforcement .....	301
Roads and Trails.....	301
Livestock Grazing .....	301
Minerals .....	302
Non-Recreation Special Uses.....	302
Private Lands.....	302
Wildfire.....	303
Economics.....	303
Other Required Disclosures .....	303
Environmental Justice .....	303
Monitoring.....	304
Economic Efficiency .....	318

<b>Chapter 5. Consultation and Coordination</b> .....	<b>321</b>
Preparers and Contributors.....	321
Interdisciplinary Team Members .....	321
Federal, State, and Local Agencies .....	324
Tribes .....	324
Distribution of the Environmental Impact Statement .....	325
Opportunity to Object .....	325
Informational Meetings .....	325
<b>References</b> .....	<b>327</b>
<b>Index</b> .....	<b>334</b>
<b>List of Acronyms</b> .....	<b>336</b>
<b>APPENDICES</b> .....	<b>338</b>
Appendix 1 – Maps of the Land Use Zone Alternatives .....	338
Appendix 2 – Inventoried Roadless Area Analyses .....	338
Appendix 3 – Monitoring Alternatives .....	338
Appendix 4 – Response to Comments .....	338

## List of Tables

Table 1. Summary of Public Open House Meetings During the Scoping Period .....	5
Table 2. Summary of Issues Considered in the Analysis.....	6
Table 3. Summary of Issues not Considered in the Analysis .....	10
Table 4. Summary of LUZ Allocations within the Planning area for each Forest by Alternative.....	26
Table 5. Comparison of the Land Use Zone alternatives based on the issues.....	27
Table 6. Comparison of Monitoring Alternatives .....	35
Table 7. IRAs within the Four Southern California National Forests.....	37
Table 8. Wildlife Habitat Relationship Vegetation Types Used in the Analysis.....	45
Table 9. MIS Tree Species from the LMP.....	48
Table 10. Acreage of Tree MIS in IRAs on each Forest. (Black oak and white fir are not presented because they often occur in mixed-species stands.) .....	48
Table 11. Summary of Threatened, Endangered, Proposed, and Candidate Species within IRAs .....	52
Table 12. Designated Critical Habitat .....	54
Table 13. Sensitive Wildlife Species Occurrence by Forest .....	55
Table 14. Management Indicator Species (MIS) Forest Occurrence.....	56
Table 15. Research Natural Areas (RNAs) within Inventoried Roadless Areas (IRAs).....	57
Table 16. Critical Biological Zones within IRAs.....	59
Table 17. Threatened & Endangered Species Habitat Acres or Number of Occurrences and Current Land Use Zoning .....	61
Table 18. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs.....	64
Table 19. Acreages of Mapped Sensitive Plants in IRAs by Species and LUZ <sup>1</sup> .....	67
Table 20. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas.....	71
Table 21. Non-Native Animal Occurrences by IRA .....	77
Table 22. Watershed Acreage, Land Ownership and Summary HUC Watershed Condition Ratings (as determined in FY11) by Forest .....	80
Table 23. ANF - WCC rating by IRA and HUC 6 watershed.....	81
Table 24. CNF – WCC 1 Rating by IRA and HUC 6 watershed.....	82
Table 25. CNF – non WCC 1 rating by IRA and HUC 6 watershed .....	82
Table 26. LPNF - WCC 1 rating by IRA and HUC 6 watershed .....	83
Table 27. LPNF - WCC non 1 rating by IRA and HUC 6 watersheds.....	83

Table 28. SBNF - WCC by IRA and HUC 6 watershed.....	84
Table 29. Air Basins and associated APCDs within the Planning Area.....	85
Table 30. SIAs within the Planning Area.....	86
Table 31. Heritage and Tribal Data for Southern California National Forests.....	87
Table 32. National Register of Historic Places by Forest.....	88
Table 33. Federally Recognized Tribes within the National Forest's Sphere of Influence.....	90
Table 34. Non-Federally Recognized Tribes within the National Forest's Sphere of Influence.....	91
Table 35. National Forest Visitation .....	92
Table 36. Hang Gliding Take-off Locations in Southern California National Forest IRAs .....	95
Table 37. Southern California National Forest Wilderness Designated since 2005.....	97
Table 38. Designated Wilderness Visits.....	98
Table 39. Landscape Attractiveness- Acres and Percent of Total Acres by Class and Forest .....	101
Table 40. Landscape Attractiveness within the IRAs- Acres and Percent of Total Acres, by Class and Forest .....	101
Table 41. Key Places Valued for Scenic Quality.....	102
Table 42. Key Places Valued for Scenic Quality within the IRAs .....	103
Table 43. Scenic Integrity Objectives within the IRAs- Acres and Percent of Total by Scenery Integrity Objective (SIO) and Forest.....	104
Table 44. Miles of Road within the Planning Area .....	107
Table 45. Miles of Unauthorized Routes within the Planning Area by Forest.....	108
Table 46. Miles of Non-Motorized Trail within the Planning Area by Forest.....	108
Table 47. Trail Type and Mileage on the Los Padres NF .....	110
Table 48. Acres within Livestock Grazing Areas by Forest .....	111
Table 49. Number of Grazing Areas by Forest.....	111
Table 50. IRAs with Livestock Grazing Areas .....	112
Table 51. Livestock Grazing Areas by Forest, IRA, and Livestock Grazing within IRAs .....	112
Table 52. Areas with more than four Fires over ten Acres*.....	120
Table 53. Summary of Miles of Fuel Breaks by Forest within the Planning area.....	122
Table 54. Appropriated Funding by Forest - FY 2006-2013 .....	123
Table 55. Acres of IRAs by County and Forest.....	125
Table 56. Part 1 Monitoring Summary .....	130
Table 57. Part 2 Monitoring Summary .....	133
Table 58. Part 3 Monitoring Summary .....	134
Table 59. Suitable Uses in Land Use Zones: Resource Management Activities.....	141
Table 60. Suitable Uses in Land Use Zones: Public Use and Enjoyment.....	142
Table 61. Suitable Uses in Land Use Zones: Commodity and Commercial Uses.....	144
Table 62. Suitable Uses in Land Use Zones: Fire and Fuels Management.....	146
Table 63. Land Use Allocation by Alternative.....	148
Table 64. Comparison of the alternatives for vegetation effects. ....	149
Table 65. Critical Habitat acres by Alternative, Species, and Land Use Zone .....	153
Table 66. Comparison of Alternative Effects on Wildlife Species and Habitats .....	156
Table 67. R5 Sensitive Wildlife Species Occurrence by Forest and IRA .....	170
Table 68. Acres of <i>Poa atropurpurea</i> Habitat in the Barker Valley IRA (Cleveland National Forest) by LUZ and Alternative.....	185
Table 69. Acres of occupied habitat of <i>Eryngium aristulatum</i> var. <i>parishii</i> in the Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River Adjacent (New) Area (Alternatives 2, 2a and 3).....	186
Table 70. Acres of <i>Chlorogalum purpureum</i> var. <i>reductum</i> Critical Habitat in the Black Mountain IRA .....	187
Table 71. Known occurrences of <i>Eremalche parryi</i> subsp. <i>kernensis</i> in the Sawmill-Badlands IRA .....	188
Table 72. Summary of Effects of Each Alternative on T & E Plant Species and Critical Habitat .....	189
Table 73. Summary of Determinations of Effects for Threatened and Endangered Species.....	195
Table 74. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs.....	197
Table 75. Acreages of Mapped Sensitive Plants in IRAs by Species .....	202
Table 76. Summary of Mapped Sensitive Plant Occurrence Acres by LUZ <sup>1</sup> .....	206
Table 77. Summary of Effects Determinations for USFS Region 5 Sensitive Plant Species Known to Occur Within Analysis Area* .....	207
Table 78. Acreages of Mapped Invasive Plant Occurrences by Forest, Land Use Zone and Inventoried Roadless Areas.....	212
Table 79. Effects of All Alternatives on Non-Native Species Introduction, Spread, and Management Actions.....	215
Table 80. ANF - WCC ratings by IRA and HUC 6 watershed- .....	218
Table 81. CNF – WCC 1 ratings Under all Alternatives by IRA and HUC 6 watershed .....	219
Table 82. CNF – non-WCC 1 ratings by IRA and HUC 6 watersheds .....	219
Table 83. LPNF – WCC 1 ratings Under All Alternatives by IRA and HUC 6 watershed .....	219

Table 84. LPNF – non WCC 1 ratings by IRA and HUC 6 watershed.....	220
Table 85. SBNF = WCC ratings by IRA and HUC 6 watershed.....	222
Table 86. Alternative 1 LUZ allocations by Forest for the SIAs within the planning area.....	224
Table 87. Alternative 2 LUZ allocations by Forest for the SIAs within the planning area.....	224
Table 88. Alternative 3 LUZ allocations by Forest for the SIAs within the planning area.....	225
Table 89. Recreational Opportunity Spectrum .....	232
Table 90. Mix of BCNM and RW by Forest within the planning area for Alternative 1 .....	232
Table 91. Mix of BCNM and RW by Forest within the planning area for Alternatives 2 and 2a .....	233
Table 92. Mix of BCNM and RW by Forest within the planning area for Alternative 3 .....	233
Table 93. Acres of Designated Wild and Scenic Rivers by Forest, LUZ and Alternative.....	239
Table 94. Acres of Eligible and Suitable Wild and Scenic Rivers by Forest and LUZ.....	240
Table 95. RW Percentage Within the Planning Area by Forest and Alternative.....	242
Table 96. Scenic Integrity Objective Mapping Rules Based on LUZ and ROS .....	245
Table 97. Alternative 1 SIO in BCNM/RW LUZs by Forest Within the Planning Area.....	246
Table 98. Alternative 2 SIO (acres) in BCNM/RW LUZs Within the Planning Area .....	246
Table 99. Alternative 2a SIO (acres) in BCNM/RW LUZs Within the Planning Area.....	247
Table 100. Alternative 3 SIO (acres) for BCNM/RW LUZs Within the Planning Area .....	248
Table 101. Miles of Existing Road by Forest and LUZ.....	252
Table 102. Miles of Existing Trail by Forest and LUZ .....	253
Table 103. Miles of Unauthorized Routes by Forest and LUZ .....	253
Table 104. Miles of Existing Roads by Forest and LUZ Under Alternative 2 .....	254
Table 105. Miles of Existing Trails by Forest and LUZ for Alternative 2.....	255
Table 106. Miles of Unauthorized Routes by Forest and LUZ for Alternative 2 .....	255
Table 107. Miles of Existing Roads by Forest and LUZ Under Alternative 2a.....	256
Table 108. Miles of Existing Trails by Forest and LUZ for Alternative 2a .....	257
Table 109. Miles of Existing Road by Forest and LUZ for Alternative 3.....	258
Table 110. Miles of Existing Trails by Forest and LUZ for Alternative 3.....	259
Table 111. Miles of Unauthorized Routes by Forest and LUZ for Alternative 3 .....	260
Table 112. Total IRA Acreage, Livestock Grazing & Black Mountain Wildhorse Territory Area Suitable Acreage, and Percent Livestock Area in IRAs by Forest .....	262
Table 113. Alternative 1 = Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones.....	263
Table 114. Alternative 2/2a =Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones.....	263
Table 115. Alternative 3 - Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones .....	264
Table 116. IRAs by Forest with No Mineral Potential.....	265
Table 117. Forest Acres Suitable for Non-Recreation Special Uses .....	277
Table 118. Miles of Fuelbreak by Forest and LUZ for Alternatives 2 and 2a .....	282
Table 119. Miles of Fuelbreak by Forest and LUZ for Alternative 3 .....	282
Table 120. Percent of Planning Area by Forest. ....	287
Table 121. Mix of Land Use Zones Aggregated at the Forest Level. ....	288
Table 122. Mix of LUZs Aggregated for the Four Southern California Forests. ....	289
Table 123. Summary of Federal and State Wilderness by County.....	298
Table 124. Summary of Recommended Wilderness by Alternative. ....	299
Table 125. Monitoring No Action - Part 1 Cost/Forest.....	306
Table 126. Monitoring No Action - Part 2 Cost/Forest.....	306
Table 127. Monitoring No Action - Part 3 Cost/Forest.....	307
Table 128. Monitoring Proposed Action - Part 1 Cost/Forest .....	310
Table 129. Monitoring Proposed Action - Part 2 Cost/Forest .....	310
Table 130. Monitoring Proposed Action - Part 3 Cost/Forest .....	311
Table 131. Extensive Monitoring - Part 1 Cost/Forest.....	314
Table 132. Extensive Monitoring - Part 2 Cost/Forest .....	315
Table 133. Monitoring Proposed Action - Part 3 Cost/Forest .....	316
Table 134. Comparison of Cost/Forest by Alternative .....	318

## **List of Figures**

---

<b>Figure 1. Comparison of the LUZ allocations by Alternative .....</b>	<b>25</b>
<b>Figure 2. Overview Map of the Los Padres National Forest (North) .....</b>	<b>38</b>
<b>Figure 3. Overview Map of the Los Padres National Forest (South).....</b>	<b>39</b>
<b>Figure 4. Overview Map of the Angeles National Forest .....</b>	<b>40</b>
<b>Figure 5. Overview Map of the San Bernardino.....</b>	<b>41</b>
<b>Figure 6. Overview Map San Bernardino National Forest (South) and Cleveland National Forest (North).....</b>	<b>42</b>
<b>Figure 7. Overview Map Cleveland National Forest (South) .....</b>	<b>43</b>
<b>Figure 8. RW for Alternatives 2/2a Shown with Existing State and Federal Wilderness. ....</b>	<b>300</b>

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# CHAPTER 1. PURPOSE OF AND NEED FOR ACTION

## Document Structure

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The Forest Service has prepared this Final Supplemental Environmental Impact Statement (Final SEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This Environmental Impact Statement discloses the environmental effects (or impacts) that would result from the proposed action and alternatives. The document is organized into five chapters:

- *Chapter 1. Purpose and Need for Action:* This chapter includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Chapter 2. Alternatives, including the Proposed Action:* This chapter provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes a description of Land Management Plan components included in all alternatives. Finally, this section provides a comparison of the alternatives.
- *Chapter 3. Affected Environment:* This chapter describes the affected environment for the proposed action and alternatives. The analysis for the Land Use Zone allocation alternatives is organized by resource area. The analysis for monitoring is discussed separately.
- *Chapter 4. Environmental Consequences:* This chapter describes the environmental effects of implementing the proposed action and alternatives. The analysis for the Land Use Zone allocation alternatives is organized by resource area. The analysis for monitoring is discussed separately.
- *Chapter 5. Consultation and Coordination:* This chapter provides a list of preparers and agencies consulted during the development of the environmental impact statement.
- *Appendices:* The appendices provide more detailed information to support the analyses presented in the environmental impact statement. They include:
  - Appendix 1 – Maps
  - Appendix 2 – IRA Analysis
  - Appendix 3 – Monitoring Alternatives
  - Appendix 4 – Response to Comments
- *Index:* The index provides page numbers by document topic.

This SEIS supplements the Final Environmental Impact Statement for the Revised Land Management Plans, originally published in 2005 and reissued in April 2006. The Notice of Availability for the FEIS was published in the Federal Register on April 21, 2006 (FR Vol 71, No. 77, page 20660). The Final Environmental Impact Statement is referenced throughout this supplement as the "FEIS". The FEIS and supporting project record,

including the Record of Decision for each forest, is available on the web at [the project website](#).

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Cleveland National Forest, or online at [the project website](#).

## Background

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Land Management Plans (LMPs or forest plans) are required by the National Forest Management Act (NFMA) of 1976. They are an integrated document that describes the goals, objectives, and management direction for each component of the National Forest System. The four southern California national forests (also referred to as the four forests) adopted revised Land Management Plans (LMPs) in April 2006. The LMPs consist of three parts:

**Part 1 is the vision;** this part of the plan looks to the future and describes a collective vision or desired condition for the national forests of southern California over time.

**Part 2 is the forest-specific strategies;** this part of the plan can be thought of as "the tools" that will be used to achieve the desired conditions in Part 1. This section includes descriptions of objectives, program emphasis and potential resource management strategies.

**Part 3 includes the design criteria.** This part of the plan provides the "rules" the Forest Service will follow as various strategies are implemented. The rules include design criteria that consist of pertinent environmental and public land management laws, standards that define the parameters for the activities the Forest Service anticipates, and other guidance (including management guides, manual and handbook direction or other appropriate reference material).

Parts 1 and 3 of the forest plans are common to all four southern California national forests. Part 2 is "customized" to accommodate the unique management requirements of each individual national forest.

The decision to adopt the forest plans was challenged in federal court by two parties in separate cases: one filed by the State of California (*California Resources Agency, et al vs. United States Department of Agriculture*), and the second by several environmental organizations (*Center for Biological Diversity, et al vs. United States Department of Agriculture*). The cases were consolidated, and on September 29, 2009, District Court Judge Marilyn Hall Patel entered judgment, granting in part and denying in part the parties' motions for summary judgment. The Court held that the Forest Service's FEIS for the revised forest plans violated NEPA and the NFMA. On December 15, 2010, the parties finalized a settlement agreement determining the forms of relief. The settlement requires, in part, that:

The Forest Service will prepare a Supplemental Environmental Impact Statement ("SEIS") that re-examines forest plan management direction with regard to Inventoried Roadless Areas ("IRAs") within the Angeles, Cleveland, Los Padres and San Bernardino National Forest (collectively, "four forests") and analyzes alternative monitoring protocols. The SEIS will include a description of the Forest Service's



efforts to coordinate with the State Plaintiffs regarding the State's policies for management of roadless areas. At the request of the Environmental Plaintiffs and the People of the State of California, the Forest Service will consider, at a minimum, the areas listed in Attachment A, or portions thereof, for potential re-zoning to the Recommended Wilderness ("RW") or Back Country Non-Motorized ("BCNM") land use zones and the SEIS will include as a component of the proposed action, a proposal to rezone these areas, or portions thereof, to the RW or BCNM land use zones. Additional alternatives will also be considered as part of the NEPA process. The Forest Service will use best efforts to complete the SEIS and issue a Record of Decision within twenty-four months of the effective date of the Settlement Agreement.

This Supplemental EIS (SEIS) for the southern California national forests LMP amendment is prepared in response to the settlement agreement requirements.

Existing land use zone allocations and the management direction for the zones are described in Part 2 of the LMPs for each forest. Existing land use zone allocations are also shown on a series of maps published with Part 2, and available on the web at [the project website](#).

Existing monitoring protocols are included in Part 3, Appendix C of the LMPs.

## **Purpose and Need for Action**

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The purpose of the proposed action is to amend LMP land use zone allocations for select IRAs and to amend LMP monitoring and evaluation protocols. This action is needed to respond to the terms of the Settlement Agreement between the Forest Service, State of California, and other settlement parties. This proposed amendment to the 2006 LMPs is limited in scope and designed to address the terms of the settlement agreement.

## **Proposed Action**

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The action proposed by the Forest Service to meet the purpose and need is to modify the existing land use zones in the identified IRAs to include more Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW) areas. A modified monitoring framework is also proposed.

The proposed action would change the Land Use Zone (LUZ) allocation to BCNM on approximately 300,000 acres, and change the LUZ allocation to RW on approximately 80,000 acres. The majority of the additional BCNM allocations are located in IRAs on the Los Padres and San Bernardino National Forests. Additions to the RW allocations are within IRAs on the Angeles and Cleveland National Forests.

On the Angeles National Forest, the Fish Canyon and Salt Creek IRAs were combined to create the proposed 40,000 acre Fish Canyon RW area. On the Cleveland National Forest, portions of the Eagle Peak, Sill Hill, and No Name IRAs, along with portions of the Cedar Creek and Upper San Diego River undeveloped areas were combined to create the proposed 23,000 acre Eagle Peak RW area. The 11,000 acre Barker Valley and 5,000 acre Caliente IRAs on the Cleveland National Forest are also proposed to change from BCNM to RW. .

The proposed action monitoring and evaluation requirements are based on the current monitoring framework (Part 3, Appendix C of the Land Management Plans). Revisions include updates to the monitoring requirements for forest health, riparian condition, and biological resource condition. These revisions to the monitoring framework apply to all National Forest System lands on the four southern California forests, not just the IRAs included in this evaluation. Monitoring indicators were also clarified to reflect current inventory methodology in several areas, and an indicator was added to track unclassified (unauthorized) roads and trails. More details on how monitoring would be implemented, and how projects would be selected for monitoring are also part of the revision.

## **Decision Framework**

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Given the purpose and need, the Forest Supervisors and/or Regional Forester review the proposed action, other alternatives, including No Action (Alternatives 1 and A), and the environmental consequences in order to determine whether the LMPs will be amended as proposed, modified by an alternative, or not at all. If the amendment will result in a significant change in the LMP (as defined by Forest Service Manual 1926.52) the Regional Forester is the deciding officer. If the changes proposed for a forest LMP are not significant, the Forest Supervisor is the deciding official.

The LMP amendment will be developed under the transition provisions of the new Forest Service planning rule found at Title 36 of the Code of Federal Regulations (CFR) § 219.17. The transition provisions state that plan amendments may be initiated under the provisions of the prior planning regulations (see Federal Register volume 74 number 242 page 67062, December 18, 2009 for more information on the prior planning rule). Under those transition provisions, this plan amendment will be conducted under the 1982 planning rule, however, the pre-decisional administrative review process described under 36 CFR Part 219 Subpart B will apply.

The decision framework does not include changes to the other components of the LMPs, such as suitable uses within land use zones, plan standards, or designation of other special areas.

## **Public Involvement**

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The Notice of Intent (NOI) was published in the Federal Register on April 27, 2012. The NOI asked for public comment on the proposal from April 27, 2012 to June 11, 2012 (Scoping Period). In addition, as part of the public involvement process, the agency published legal notices in the newspapers of record for the Pacific Southwest Region and each Forest. Scoping letters were mailed to over 2,500 individuals, groups, agencies, tribes, state and local governments, and elected officials. A project web page was generated through the Forest Service Planning, Appeals, and Litigation System that provided public access to detailed information about the proposed action, and included access to detailed maps and supporting material. Comments were accepted through the project web page, by email, or by mail.

The Forest Service hosted nine public open house meetings throughout the planning area. Detailed maps were available for viewing and Forest Service staff was available to answer

questions. Written comments were accepted. Table 1 summarizes the meeting dates and locations as well as public attendance.

**Table 1. Summary of Public Open House Meetings During the Scoping Period**

Date	Location	Host Forest	Public Attendance
May 29, 2012	Ventura	Los Padres	20
May 30, 2012	Arcadia	Angeles	70
May 31, 2012	San Bernardino	San Bernardino	17
May 31, 2012	Acton	Angeles	22
May 31, 2012	Ramona	Cleveland	39
May 31, 2012	Santa Maria	Los Padres	8
June 1, 2012	Frazier Park	Los Padres	40
June 5, 2012	Alpine	Cleveland	20
June 5, 2012	Corona	Cleveland	20

Over 10,000 comments were received during the scoping period. The majority of comments (9,800) came through email. About 187 comments were submitted through the project web portal. About 50 written comments were received at the public meetings, and approximately 75 letters were received (some of which duplicated letters received by email).

Of these comments, about 7,200 were form letters, 1,800 were expanded form letters (a form letter with additional comments) and close to 500 were unique comment letters or emails.

Using the comments from the public, other agencies, and tribes, the interdisciplinary team developed a list of issues to address.

The draft SEIS was released for public comment and review on February 15, 2013. By the close of the 90 day comment period on May 16, 2013 the Forest Service had received over 11,000 comment letters, emails, or comment cards, including 1,739 postcards that were delivered together in a box. Approximately 96 percent of the filings were associated with an organizational response, primarily form letters. After accounting for duplicate filings and form letters, it was determined that 456 unique letters were received. Appendix 4, "Response to Comments on the Draft Supplemental Environmental Impact Statement" provides a description of the process, demographics of the responders, as well as letters and responses.

## Issues

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In the forest planning context an issue can be a potential factor for determining need for change for a plan; a specific resource concern about a proposed action; a point of contention or disagreement; or a subject or question of widespread public interest about management of the National Forest System. Issues that are relevant to the proposed action were identified and summarized in Table 2. Issues focus the analysis on the important factors that disclose the effects of the proposed action and alternatives.

**Table 2. Summary of Issues Considered in the Analysis**

<b>Natural Resources Environment</b>	
<b>Issue</b>	<b>Indicator used for assessment</b>
<p><b>Vegetation communities</b> – LMP standards provide general direction for vegetation and habitat management. These standards are applied at the project level. LUZ allocations influence the types and intensity of projects that may occur in the future. Increasing the area allocated to more restrictive LUZs could improve vegetation condition over time as future projects would be guided by the more restrictive LUZs.</p>	<p>Cover type by LUZ Management Indicator Species</p>
<p><b>TEPCS species</b> – The IRAs provide habitat to a wide range of Threatened, Endangered, Proposed, Candidate, and Sensitive (TEPCS or TES) plant and animal species. LMP standards and consultation with the Fish and Wildlife Service and the National Marine Fisheries Service protect these species and habitat when projects are implemented. LUZ allocations influence the types and intensity of projects that may occur in the future. Increasing the area allocated to more restrictive LUZs could improve species habitat.</p>	<p><u>Plants</u> T&amp;E species occurrence by LUZ T&amp;E critical habitat by LUZ Sensitive species occurrence by LUZ Suitable uses within LUZs</p> <p><u>Animals</u> T&amp;E species occurrence by LUZ T&amp;E critical habitat by LUZ Suitable uses within LUZs NRM TESP acres by LUZ</p>
<p><b>Wildlife structures</b> – Access to maintain developed wildlife structures such as water guzzlers may be restricted by changes in LUZ.</p>	<p>Access restriction by LUZ Locations of guzzlers</p>
<p><b>Invasive plants</b> – Changes in LUZs could influence the spread of invasive plants. Available control methods may vary by LUZ as well.</p>	<p>Miles of system roads and trails Suitable uses within LUZs</p>
<p><b>Water Quality</b> – Suitable uses allowed under the various LUZs can have an impact on water quality and overall watershed condition.</p>	<p>Watershed Condition Class by LUZ Stream type by LUZ Springs by LUZ</p>
<p><b>Air Quality</b> – Suitable uses allowed under the various LUZs can have an impact on air quality.</p>	<p>Suitable uses within LUZs</p>
<b>Social and Economic Environment</b>	
<b>Issue</b>	<b>Indicator used for assessment</b>
<p><b>Heritage Resources</b> – Lands within the IRAs are valued by native American tribes as part of their ancestral lands. The IRAs also have archeological and historic resources within the boundaries. Although these resources are identified and protected during project evaluation, the level of development allowed under the different LUZs can affect the level of risk.</p>	<p>Suitable uses within LUZs</p>
<p><b>Recreational user access</b> – The allowable access method varies by LUZ. Modifying LUZ allocations can change the type of access, particularly for motorized or mechanized equipment users.</p>	<p>Miles of system roads and trails</p>

<p><b>Recreation Opportunity</b> – The recreational opportunity objective will change with the change in Land Use Zone allocations.</p>	<p>Recreational Opportunity Spectrum objective (ROS) by LUZ</p>
<p><b>Hunting participation</b> – Executive Order (EO) 13443 directs federal agencies to facilitate the expansion and enhancement of hunting opportunities. The EO also directs agencies to consider the effect of their actions on trends in hunting participation and to consider the economic and recreation value of hunting. The Federal Lands Hunting, Fishing, and Shooting Sports Roundtable Memorandum of Agreement was developed to facilitate implementation of the EO.</p>	<p>Miles of system roads and trails</p>
<p><b>Tourism</b> – National forest recreation generates spending in local communities. Changes in recreational use from reduced motorized or mechanized use or increased hiking could affect local economies.</p>	<p>Miles of system roads and trails</p>
<p><b>Accessibility for Americans with Disabilities</b> – Access to lands may be restricted for those Americans with disabilities if access levels change under the alternatives.</p>	<p>Miles of system roads and trails</p>
<p><b>Wild and Scenic Rivers (W&amp;SR)</b> – Two rivers within the IRAs have been designated as W&amp;SR by Congress since the LMP was revised in 2006. The LMP also classified several rivers within the IRAs as eligible W&amp;SR. LUZs allocated to these designated or eligible W&amp;SR must be consistent with the Wild and Scenic Rivers Act requirements.</p>	<p>LUZs within W&amp;SR corridor</p>
<p><b>Scenic Integrity</b> – The LMP establishes Scenic Integrity Objectives (SIOs) for all National Forest System lands within the planning area. Areas currently zoned as Recommended Wilderness and all existing wilderness areas have very high SIOs. Adding additional areas of RW could change the SIOs for those areas.</p>	<p>SIOs</p>
<p><b>Illegal uses</b> – The remote nature of many of the IRAs could make them prime candidates for illegal uses such as marijuana cultivation or game poaching. Public visitation may discourage illegal uses. Reductions in access may increase the amount of illegal activity.</p>	<p>Miles of system and unauthorized roads and trails</p>
<p><b>Law enforcement and emergency response</b> – Emergency responders (law enforcement, fire, and search and rescue) often rely on motorized equipment to conduct missions in the remote IRAs. Restrictions in access could delay or hinder emergency response.</p>	<p>Miles of system roads and motorized trails</p>

<p><b>Border security</b> – Illegal narcotics and human trafficking on federal lands along the southwest border threatens national security as well as natural resources. The Border Patrol needs access to federal lands to carry out their homeland security responsibilities. Restricting access to lands could reduce the effectiveness of the Border Patrol actions. This issue applies to IRAs on the Cleveland NF.</p>	<p>Miles of system roads and motorized trails</p>
<p><b>Implementation cost</b> – The implementation cost will vary between alternatives, and this is particularly true for the monitoring alternatives.</p>	<p>Relative cost of implementation when compared to current funding</p>
<p><b>Facility Operations and Maintenance</b></p>	
<p><b>Issue</b></p>	<p><b>Indicator used for assessment</b></p>
<p><b>Transportation system planning</b> – The ability to expand the existing transportation system for motorized and mechanized use would be affected by changes in LUZ. Several opportunities for expansion including the San Diego Sea to Sea trail (also known as the Trans-county trail), and Ballinger to Hungry Valley trail would be affected by changes in LUZ.</p>	<p>Evaluation of each opportunity by alternative</p>
<p><b>Trail maintenance</b> – The Forest Service could lose some volunteer labor available for trail maintenance if mountain bikes and motorized vehicles were no longer able to use the trails.</p>	<p>Miles of system roads and mechanized trails OHV and mountain bike users time contributed for trail maintenance</p>
<p><b>Commodity and Commercial Uses</b></p>	
<p><b>Issue</b></p>	<p><b>Indicator used for assessment</b></p>
<p><b>Grazing Permits</b> – Many of the IRAs have grazing permits which authorize motorized access to authorized improvements. Changes in LUZ could affect access.</p>	<p>Suitable uses by LUZ Acres of grazing allotments by LUZ Locations of range improvements including roads</p>
<p><b>Mineral Materials</b> – Allocation of LUZs that limit development could impact the availability of aggregate needed to support construction.</p>	<p>Regionally Significant Aggregate sources within IRAs</p>
<p><b>Locatable minerals</b> – Allocation of LUZs could affect access to mining claims.</p>	<p>LUZ access restrictions Mining Claim locations</p>
<p><b>Special Uses</b> – Many of the IRAs have authorized special uses within or adjacent to the IRA, including communication sites, sediment disposal areas, power lines, gas lines and other miscellaneous uses. The suitability of these uses varies with the LUZ.</p>	<p>Suitable uses by LUZ Designated corridors Locations of Special Uses</p>

<b>Lands (Real Estate)</b>	
<b>Issue</b>	<b>Indicator used for assessment</b>
<b>Private lands</b> – Private lands occur within and adjacent to the IRAs. Development of private lands is guided by county general plans. Access may also be required through the IRAs. Changes in LUZs may not be compatible with access needs or acceptable development levels.	Access roads to private land General Plan Zoning
<b>Wildland Fire and Community Protection</b>	
<b>Issue</b>	<b>Indicator used for assessment</b>
<b>Fire Suppression in IRAs</b> – Changes in LUZ could limit the level of access for fire suppression and the use of motorized and mechanized equipment.	Miles of system road
<b>Fuels management</b> - Changes in LUZ may reduce access to treatment areas and limit use of mechanical equipment, which may limit fuels treatments and increase the chance of damaging wildfires.	Suitable fuels management uses by LUZ
<b>Effect on Fire Cooperators</b> – Changes in LUZ, particularly RW allocations, may limit the role of cooperating fire agencies.	Wilderness legislation
<b>Coordination with other public planning efforts</b>	
<b>Issue</b>	<b>Indicator used for assessment</b>
<b>Consistency with other plans</b> – Forest Service LMPs could affect the implementation of other agencies regional or state level plans. These include both state and federal plans for a variety of resources.	Review of applicable plans

Issues that are not relevant to the proposed action are identified and summarized in Table 3. Non-relevant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, forest plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in 40 CFR § 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (40 CFR § 1506.3)..."

**Table 3. Summary of Issues not Considered in the Analysis**

<b>Issue</b>	<b>Reason why the issue is outside the scope</b>
<p><b>Travel Management</b> – Many comments noted that the Forest Service has closed and gated many roads, restricting access to the public. Other routes are closed on the motor vehicle use map. Many user created routes were also closed and the decommissioning status is unknown. Numerous commenters requested that those routes be opened as part of this amendment.</p>	<p>These route level decisions are made through the travel management process governed by 36 CFR 212 Subpart B or in subsequent project specific decisions implementing travel management closures. The decisions made as part of the LMP amendment will not include route level decisions, but access to the IRAs will be evaluated in the LMP amendment analysis.</p>
<p><b>IRA Boundary Issues</b> – The IRAs were mapped over several generations of Roadless Area Review and Evaluations starting in the mid 1970s. The current IRA boundaries were established by regulation with the publication of the Roadless Area Conservation Rule in 2001. The 2001 IRAs occasionally overlap Forest Service system roads, communication sites, and other permitted facilities. Some commenters see this amendment as an opportunity to “clean up” those mapping issues.</p>	<p>The Roadless Area Conservation Rule (RACR) defines the scope of the IRAs (36 CFR § 294.11). Although the rule suggests that updates and revisions to the IRAs are possible, no process is specified. The rule specifically prohibits changes in the scope of the rule through the Land Management Plan amendment process (36 CFR § 294.14(e)). Until the Forest Service develops additional direction, changing the IRA boundaries is outside the scope of this amendment.</p>
<p><b>Wild and Scenic River suitability studies</b> – The 2006 LMP Revision evaluated the eligibility of numerous rivers throughout the planning area, but except for those study rivers identified on the Los Padres National Forest, deferred the suitability determinations of those eligible rivers. Many commenters see this current LMP amendment process as an opportunity to conduct those suitability studies.</p>	<p>This need to complete suitability studies was raised as an appeal issue for the LMP revision. The Appeal Reviewing Officer for the Chief upheld the decision to defer the suitability studies as consistent with agency policy. Eligible rivers are protected by the current LMP, and those management provisions will not be affected by the LMP amendment. Suitability studies (FSH 1909.12 Chapter 80) are distinctly different from wilderness evaluation (FSH 1909.12 Chapter 70), and although several of the eligible rivers overlap with the IRAs considered in this LMP amendment, many do not overlap. Including the suitability studies would expand the geographic scope and add additional issues that are outside the scope of the proposed action. Including suitability studies would take away from the focus on the identified IRAs.</p>



Issue	Reason why the issue is outside the scope
<p><b>Defensible space</b> – The LMP Developed Area Interface (DAI) LUZ is designed primarily around fire and fuels management in the urban interface zone. The LMP also adopts strategies for direct community protection. One commenter suggests that research from Dr. Jack Cohen should be used to change how the Forest Service manages chaparral adjacent to structures.</p>	<p>The LMP fire management strategy is used to design specific fuels projects, and applies on a forest-wide basis. Fire research is best applied at the project level when specific treatments are being considered. Revising the fire management strategy on a forest-wide basis is outside the scope of this analysis.</p>
<p><b>Mountain Bike Plan</b> – The current LMPs manage mountain bike use as one of many recreational activities. All open roads and trails outside of designated wilderness (except the Pacific Crest National Scenic Trail), are open to mountain bikes. There are no comprehensive mountain bike trail plans in place, and several commenters suggested that the LMP amendment should consider such a plan.</p>	<p>Forest Service policy requires that trail use be managed through the use of trail management objectives (FSM 2350) which are tied to LMP direction. Individual use plans are not required. Although a mountain bike plan is outside the scope of this analysis, the effect of LUZ allocations on mountain bike access will be considered in the LMP amendment.</p>
<p><b>Wilderness Management Plans</b> – The four southern California national forests have many designated wilderness areas. Los Padres Forest Watch suggested the LMP amendment process should be used to develop management plans for the 10 existing wilderness areas on the Los Padres National Forest.</p>	<p>Wilderness planning is guided by the designating legislation, FSM 2322 and the program direction in the LMP. The purpose of this amendment is to evaluate management direction of IRAs. Preparing management plans for established wilderness is outside the scope of the IRA amendment.</p>
<p><b>Energy Corridors</b> – The Forest Service amended the LMPs in 2009 by designating several West-Wide Energy Corridors (WWEC) on the Angeles, San Bernardino and Cleveland National Forests. One commenter suggested the impacts from corridor designation should be part of the analysis.</p>	<p>The effects of the corridor designation were considered as part of the corridor project (see the WWEC Final Programmatic EIS). The WWEC decision was litigated, and the parties filed a Settlement Agreement on July 3, 2012 with the court to resolve the case. The settlement includes a process to review and revise the designated corridors. Any proposed changes to corridors that are based on that review would be evaluated as a separate plan amendment or revision and would be outside the scope of this analysis. This LMP amendment will consider the effects of LUZ allocations on existing corridors and potential future utility development.</p>

Issue	Reason why the issue is outside the scope
<p><b>Allowable uses within wilderness</b> – Several commenters raised issues or concerns with a range of uses in designated wilderness. These included hunting, mountain bike use, and renewable energy development.</p>	<p>The Wilderness Act and designating legislation controls what uses are allowed within designated wilderness. Wilderness is open to hunting (as are most areas on the national forests) unless the area is subject to a general closure. Mechanized equipment for recreation use (mountain bikes) is not allowed in wilderness (other than as needed to allow for access for the disabled) nor is renewable energy development. Although allowable uses are already defined by the Wilderness Act and designating legislation, the LMP Amendment analysis will consider the effect of LUZ allocations on potential future uses consistent with existing law.</p>
<p><b>Agency Funding</b> – Forest Service management of the national forests is subject to program priorities and funding levels established by Congress. Several commenters suggested that the analysis should consider current and future funding levels in the effects analysis.</p>	<p>Speculating about future funding levels is beyond the scope of any program or project analysis. However, implementation cost is an issue that can be evaluated. The analysis will consider the cost, in general terms, of implementing the various alternatives, particularly as it relates to the monitoring alternative.</p>

## Lead and Cooperating Agencies \_\_\_\_\_

The Forest Service is the lead federal agency for the SEIS for the Land Management Plan Amendment. Other federal agencies with jurisdiction by law may be cooperating agencies at the request of the lead agency. The U.S. Fish and Wildlife Service and National Marine Fisheries Service have jurisdiction over endangered species, and have agreed to be cooperating agencies for this planning effort. The Environmental Protection Agency has jurisdiction over the Clean Air and Clean Water Acts, and has also agreed to participate as a cooperator.

Other federal agencies, state and local governments, and tribes with special expertise related to an environmental issue may be a cooperator. The Forest Service invited federal, state, local governments and tribes to join the planning effort as cooperators. The State of California Natural Resources Agency (including the Departments of Fish and Wildlife<sup>1</sup>, Parks and Recreation, and Forestry and Fire Protection), Ventura County, and Orange County Fire Authority have agreed to participate as cooperating agencies.

## Other Permits or Approvals \_\_\_\_\_

LMP amendments do not authorize specific actions, and no permits or approvals are required by other agencies before the LMP amendment may be implemented.

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<sup>1</sup> Formerly the Department of Fish and Game, the Department changed names on January 1, 2013

## Other Related Efforts

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There are no other plan amendments being considered at this time. The four southern California national forests are consulting with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on the ongoing activities under the current LMPs. This consultation is part of the court ordered remedy for *Center for Biological Diversity, et al vs. United States Fish and Wildlife Service et al (No. C 08-01278)*. As described in Chapter 3, the consultation with the National Marine Fisheries Service was completed by August 2013, and consultation with the Fish and Wildlife Service was completed by September 30, 2013.

The Forest Service issues a quarterly “Schedule of Proposed Actions” (SOPA) for each forest. The SOPA Report contains a list of proposed actions that will begin or are currently undergoing environmental analysis and documentation. If a project is proposed in an IRA, the four southern California national forests list the roadless area in the project description. The SOPA is available on the web at:

[Forest Service SOPA](#)

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## **CHAPTER 2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION**

### **Introduction**

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This chapter describes and compares the alternatives considered for the Southern California National Forests Land Management Plan Amendment. It includes a description of each alternative considered. Detailed maps are available in Appendix 1 and online at the [Project web page](#). This section also presents the alternatives in comparative form, defining the differences between each alternative and providing a clear basis for choice among options by the decision maker. Some of the information used to compare the alternatives is based upon the design of the alternative (i.e., the Land Use Zone designations) and some of the information is based upon the environmental, social and economic effects of implementing each alternative (i.e., effect on wildlife habitat and watershed condition).

It is important to note that any alternative that proposes additional areas as recommended wilderness should be considered a preliminary administrative recommendation as it relates to eventual wilderness designation. If an alternative that includes recommended wilderness is adopted, the preliminary administrative recommendation will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. The Congress has reserved the authority to make final decisions on wilderness designation.

### **Alternatives Considered in Detail**

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The Forest Service is proposing two independent and distinct actions for the proposed LMP amendment. The first component of the proposed amendment would change the land use zone (LUZ) allocations for select roadless areas on the four forests. In addition to the No Action alternative and the Proposed Action, the Forest Service identified two additional alternatives to consider in detail. One of the additional alternatives, Alternative 2A, the Preferred Alternative, was developed in response to comments on the Draft SEIS.

The second part of the proposed amendment would modify the monitoring and evaluation requirements adopted in the LMP. The monitoring and evaluation requirements for implementation of forest plans as required by 36 CFR 219.11(d) are typically designed around the forest plan goals, objectives, and standards in order to periodically determine and evaluate the effects of management practices. Forest Service policy does not require the analysis of alternative monitoring methods but monitoring alternatives are included in this SEIS as required by the Settlement Agreement. The Forest Service developed two monitoring alternative for consideration in detail, in addition to the No Action alternative.

The LUZ and monitoring alternatives are separated to provide clarity in the analysis and disclosure of effects. The land use zone allocations apply to a select group of roadless areas, and will affect the uses of those specific lands. The analysis focuses on how the resources on those lands could change under the different land use zone allocations proposed by the alternatives.

The monitoring and evaluation protocols apply forest-wide, not just to the set of IRAs being analyzed. They meet or exceed agency requirements for monitoring and will influence the implementation of plan standards and guidelines within all resource areas. The analysis of the monitoring and evaluation protocols focuses on how the alternative strategies affect funding, staffing and economic efficiency.

## **Land Use Zone Allocations**

### **Alternative 1 - No Action**

Under the No Action alternative, the current land use zones would be implemented for the four southern California national forests. The maps for the No Action alternative (in Appendix 1 and available online) reflect the current LUZ allocations adopted as part of the LMP Alternative 4a.

### **Alternative 2 - The Proposed Action**

The Proposed Action responds to the Settlement Agreement by re-zoning the majority of the land use zone allocations within the IRAs listed in the Settlement Agreement to Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW). The allocations are based on the wilderness evaluations for the IRAs that were updated concurrent with this analysis. Appendix 2 provides that updated analysis. Two of the areas in Appendix 2 are undeveloped areas proposed by the public and evaluated for wilderness potential in the 2006 LMP revision but are not Inventoried Roadless Area per the Roadless Area Conservation Rule (RACR). Nevertheless, for the purpose of aiding readability of this environmental document, narrative or tables refer to these areas collectively as IRAs. The wilderness evaluations identify the capability, suitability, and need for wilderness associated with each IRA.

Several corrections were made to Alternative 2 in response to comments on the Draft SEIS. These include small adjustments in the LUZ boundaries to exclude a utility corridor in the West Fork IRA and a portion of a permitted ski area facility in the Cucamonga B IRA.

Projects currently under contract, permit, or other authorizing instrument (such as grazing permits and electronic sites) will not be affected by the decision; however, projects may be modified to adopt all or part of this direction where Forest Service managers deem appropriate. Re-issuance of existing authorizations will be treated as new decisions, which must be consistent with any new direction adopted as part of the amendment.

Based on this updated analysis, the Proposed Action land use zones were developed using the following guidelines:

- Existing RW land use zones were maintained.
- Areas within the settlement IRAs that are capable and available for wilderness in areas of high need were allocated to RW. Capable and available areas adjacent to the settlement IRAs were also included in the RW allocation when inclusion created a more logical wilderness area boundary.
- Areas within the settlements IRAs that are capable and available for wilderness in areas of low or moderate need were allocated to BCNM.

- Areas within the settlements IRAs not capable or suitable for wilderness were allocated to other land use zones as follows:
  - Motorized access on existing authorized roads and trails was maintained, with 100 foot buffers applied on each side of county and forest roads, and 300 foot buffers applied on each side of state highways. The current forest plan LUZ allocation for these roaded areas will not change as part of this amendment and are a mix of Back Country (BC) or Back Country Motorized Use Restricted (BCMUR).
  - Existing Developed Area Interface (DAI) zones were maintained around structures/facilities to provide for fuel treatments. DAI zones in chaparral fuels were set a minimum distance of 300 feet from structures, with larger DAI zones in timbered areas.
  - Fuel breaks buffers were set at 300 feet if there was a National Forest System (NFS) road or motorized trail associated with the fuel break.
  - Facilities authorized under permit such as communication sites and powerlines not already in BCNM or RW were buffered to maintain the current allocations.
- Critical Biological (CB) zones were maintained or included in RW.

In response to scoping comments, the following incremental changes were incorporated into the Proposed Action:

- Several Forest Service trails in the proposed Salt Creek and Fish Canyon RW areas, including the Gillette Mine and Fish Canyon trails, were removed from the proposed action to allow continued use by mountain bikes.
- The corridor along the Gold Hill road in the Sespe-Frazier IRA was widened to maintain suitable LUZ allocations for an Off-Highway Vehicle (OHV) trail parallel to the road.
- The Ribbonwood Campground in the Cactus Springs B IRA was removed from the proposed action to maintain the current LUZ.
- The following standard is proposed for the Los Padres LMP:
  - LPNF S2 – The Los Padres Condor Range and River Protection Act of 1992 states, "The Toad Springs road corridor delineated as potential wilderness shall remain open to off-road traffic until construction of an alternate route, which bypasses this area, is completed. These potential wilderness lands shall be automatically incorporated in and managed as part of the Chumash Wilderness upon publication of a notice in the Federal Register." In furtherance of this act, the Forest Supervisor may approve an alternate route consistent with LMP standards with the following exception:
    - Off-highway vehicle use of forest system trails is considered suitable for BCMUR and BCNM land use zone allocations if the trail construction is conditioned on permanent closure of the Toad Springs trail.

### **Alternative 2a - The Preferred Alternative**

Alternative 2a includes the design criteria and features of Alternative 2, with the following modifications to the land use zones:

- The proposed BCNM land use zone was reduced slightly in the Black Mountain IRA to accommodate the Quail Trail relocation.
- The proposed RW land use zone for the Salt Creek and Fish Canyon IRAs was expanded to include two adjacent undeveloped areas along the abandoned “oil well” road and the Sawtooth/Warm Springs Mountain Road. Also, Forest Service non-motorized trails zoned as BCNM corridors were added back into RW.
- The proposed RW land use zone for Raywood Flat IRA was expanded to include the area around the South Fork of the Whitewater River while leaving a corridor of BCMUR along road 2S01.
- The proposed RW land use zone along the Upper San Diego River Undeveloped Area was adjusted to provide a more manageable boundary.
- The proposed RW land use zone for the Cedar Creek Undeveloped Area was expanded to the east (up to the boundary of the Inaja Reservation). The land use zone allocation around the Cedar Creek Road was left as BC.
- The proposed RW land use zone adjacent to the Eagle Peak IRA was reduced slightly to accommodate future trail head development to the Three Sisters area.
- The land use zone for the King Creek Research Natural Area in the Sill Hill IRA was changed to RW.

These modifications are very focused and developed in response to comments on the Draft SEIS and to new information. All other aspects of Alternative 2a are the same as Alternative 2. The scope of Alternative 2a is within the scope of actions analyzed in the Draft SEIS.

### **Alternative 3 - Recommended Wilderness Emphasis**

Alternative 3 was developed in response to comments from groups that wanted more recommended wilderness. Alternative 3 rezones the majority of the land use zones allocated within the IRAs to RW as shown on the maps in Appendix 1. The same guidelines used to avoid conflicting uses in Alternative 2 apply to Alternative 3 with the following exception:

- Forest Service non-motorized trails were not excluded from RW allocations in any area.

The following two areas were not allocated to RW for the reasons described:

- Portions of the Sespe-Frazier IRA were not included in the RW allocations due to the extensive road system within the IRA but rather were allocated to BCNM.
- The Ladd IRA was not allocated to RW because it is bisected by a major utility corridor. That same corridor bisects the Coldwater IRA, and the area north of the corridor was not allocated to RW because of its small size.

The additional RW allocations outside of but adjacent to IRA boundaries in Alternative 2a are incorporated into Alternative 3 for the Final SEIS. In addition, an undeveloped area adjacent to the Sespe-Frazier IRA was added to Alternative 3 in response to comments. An area around Wheeler Springs on the south end of the Dry Lakes IRA was left in the DAI land use zone to allow for a community protection area.

### **Connected Actions**

The LMP classifies the Recreation Opportunity Spectrum (ROS) and Scenic Integrity Objectives (SIOs) for specific areas of the forests based on the allocation of land use zones.



A decision to change the land use zone allocations as proposed in Alternatives 2, 2a, and 3 would trigger a change in the ROS and SIOs. The effects of those changes are described by alternative in Chapter 4.

## **Monitoring and Evaluation Requirements**

The monitoring alternatives considered in this document are applicable across the entire southern California national forests, not just the IRAs included in this evaluation.

### **Alternative A - No Action**

There would be no change to the current monitoring requirements under the No Action alternative. The current monitoring requirements are found in LMP Part 3, Appendix C.

### **Alternative B - The Proposed Action**

The proposed action includes monitoring and evaluation requirements described in detail in Appendix 3. The monitoring proposed action was incrementally changed after scoping to focus on the monitoring questions and indicators and less on the specific details of implementation. The proposed action monitoring and evaluation requirements are based on the current monitoring and evaluation requirements with the following revisions:

- Update Part 1 monitoring questions to:
  - Add a question for mortality risk.
  - Add a question for riparian condition
  - Drop the question for general forest activities.
  - Add an indicator for unauthorized roads and trails.
  - Clarify and update several indicators to reflect current inventory methodology.
- Add a section that describes the implementation of Part 1 monitoring in greater detail.
- Expand the description of Part 3 monitoring to provide more detail on how to select projects for monitoring.

### **Alternative C - Extensive Monitoring**

Alternative C, described in detail in Appendix 3, provides for more intensive inventories and surveys than the current monitoring plan or Alternative B. It is based in part on the concepts promoted by the conservation groups during scoping.

Alternative C follows the same general format as the Proposed Action Monitoring Alternative in that the monitoring requirements are associated with all three parts of the LMP. Alternative C would maintain the three part strategy with the following modifications. There would be more use of baseline inventories for Part 1 monitoring using a sampling approach. Under Alternative C, Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Alternative C Part 3 would monitor more projects based on a 20% annual sample of new projects and a 20% sample of ongoing projects.

## **Agency Preferred Alternative**

The regulations at 40 CFR § 1502.14(e) require the Forest Service to identify the agency's preferred alternative if one or more alternatives are proposed, in the draft statement. According to the Council on Environmental Quality (CEQ), the "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors (CEQ 1981). Identification of the "agency's preferred alternative" in the environmental document informs the public of the agency's current preferred course of action (FSH 1909.15 § 16).

The preferred land use zone alternative for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests is Alternative 2a. The preferred monitoring alternative for all four southern California national forests is Alternative B.

## **Features Common to All Alternatives**

### **Forest Plan direction**

The proposed amendment does not change the forest-wide management direction adopted in 2006. The existing LMP land use zone definitions, the suitable uses identified within the individual land use zones, and the plan standards remain as described in the current LMPs. Land use zone descriptions and suitable uses are found in Part 2 of the LMPs. Forest-specific plan standards are also in Part 2, and plan standards applicable to all four forests are found in Part 3.

Existing direction that will not change also includes the Regional Forester's decisions for recommended Wild and Scenic Rivers, Research Natural Areas, and Special Interest Areas. These decisions are outlined in the individual Record of Decision for each forest and also described in Part 2 of the LMPs.

### **Implementation of the 2001 Roadless Area Conservation Rule**

The proposed amendment will not affect the implementation of the 2001 Roadless Area Conservation Rule (36 CFR Part 294 Subpart B). The Roadless Area Conservation Rule (RACR) was published in the Federal Register on January 12, 2001 (66 FR 3244). Ten lawsuits were filed challenging the rule. In May 2001, a preliminary injunction barring implementation of the rule was issued by a federal district court in Idaho. The Ninth Circuit Court of Appeals reversed that ruling, and the RACR became effective in April 2003.

In July 2003, a federal district court in Wyoming upheld a State of Wyoming challenge to the RACR holding that promulgation of the RACR was procedurally flawed under the National Environmental Policy Act and substantively illegal under the Wilderness Act. The court permanently enjoined the rule. The decision was appealed to the Tenth Circuit Court of Appeals, but the court declared the case moot and vacated the Wyoming order after the 2005 State Petitions Rule was promulgated.

The LMPs for the four forests were issued when the 2005 State Petitions Rule was in effect. Under the State Petitions Rule, the land use zone allocations made in the LMPs included designations that allowed road construction and reconstruction in approximately 28% of the one million acres of IRAs within the four forests.

The 2005 State Petitions Rule triggered two additional lawsuits in a district court of California. On September 20, 2006, the California court set aside the State Petitions Rule, and reinstated the RACR. The decision was appealed and on August 5, 2009, the appellate court affirmed the district court's ruling.

In response to the reinstatement of the RACR, the State of Wyoming filed a second lawsuit (*Wyoming II*) challenging the RACR. On August 12, 2008, the Wyoming court again set aside and enjoined the RACR. The Wyoming decision placed the Forest Service in a conundrum of trying to comply with the California court's order *to follow* the RACR and the Wyoming court's order *to not follow* the RACR. The government filed an appeal on August 13, 2009 to the Tenth Circuit Court.

On October 21, 2011, the 10<sup>th</sup> Circuit Court of Appeals reversed the Wyoming District Court and upheld USDA's 2001 Roadless Rule in Wyoming v. USDA. On March 2, 2012, Judge Brimmer (Wyoming) lifted his injunction on the 2001 Roadless Rule. Although Wyoming petitioned the Supreme Court for review, the petition for a writ of certiorari was denied by the Supreme Court on October 1, 2012.

The purpose of the RACR is "... to provide, within the context of multiple use management, lasting protection for inventoried roadless areas within the National Forest System" (36 CFR § 294.10). Under the RACR, new road construction and reconstruction are generally prohibited in IRAs, and timber harvest is only permitted under a few limited exceptions. All LMP direction allowing road reconstruction and reconstruction in IRAs is superseded by the 2001 Roadless Rule without further agency action, and Forest Service project decisions will be guided by the LMP direction as modified by the RACR.

## **Alternatives Considered but Eliminated from Detailed Study**

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the Proposed Action suggested a number of alternatives. Comments on the Draft SEIS suggested a few additional alternatives. Some of these alternatives may have been outside the scope of the project or duplicative of the alternatives considered in detail. Therefore, a number of alternatives were considered but eliminated from detailed consideration for reasons summarized below.

**Less BCNM designation** – The Proposed Action would allocate over 92% of the IRAs to BCNM and RW, consistent with the Settlement Agreement requirements for analysis and consideration. Several commenters suggested an alternative that had less change in BCNM designations would provide a better range of alternatives.

Approximately 40% of the planning area is allocated to BCNM or RW under the current LMP and 57% of the area is allocated to BC or BCMUR. This existing allocation is represented by the No Action alternative. The Proposed Action allocates the BC and

BCMUR areas to either BCNM or RW. Alternative 3 allocates those areas primarily to RW. The proposal for less BCNM designations falls between the No Action and Proposed Action alternatives, and is similar to the No Action alternative. As a consequence, analyzing this additional alternative would be somewhat duplicative. While there are many different possible combinations of LUZ allocations, the range of alternatives represented by the four alternatives provides the responsible official a range of alternatives from which to choose.

**Establish wider corridors for roads and utilities** – The Proposed Action buffered most roads and utilities by 100 feet on centerline, resulting in a 200 foot wide corridor. Corridor widths may be wider along fuel breaks and in areas with combination of roads and other improvements. Suggested alternative corridors included widths ranging from 300 feet to one half mile. Wider corridors were suggested to provide room for repair or reconstruction of facilities without the need for LMP amendments or congressional action if the area became designated wilderness. The 100 foot wide Toad Springs trail corridor through the Chumash Wilderness was often cited as an example of where the corridor is too narrow to allow reconstruction of the trail currently closed by a landslide.

Alternatives 2, 2a, and 3 include corridors that vary in width in areas with known problems. Increasing the default corridor width for all roads would unnecessarily limit the consideration of BCNM and RW land allocations in areas with no documented problems, and would not provide a meaningful difference for comparison between alternatives.

Based on a survey of existing wilderness areas within California, the congressional approach to corridor widths varies widely between legislative acts. Corridor widths range from 100 feet in the Snow Mountain wilderness to over 600 feet along the Coffee Creek road in the Trinity Alps Wilderness. There are also some very narrow corridors, including a 50 foot corridor in the Kaivah Wilderness and a 60 foot corridor in the Sanhedrin Wilderness.

The variable corridor approach used in this amendment is reasonable for a planning level decision. Thus an alternative of overall wider corridors was considered and eliminated from detailed study.

**Develop a new land use zone** – Both Los Padres Forest Watch and the California Wilderness Coalition suggested the analysis consider a new LUZ that would be more restrictive than BCNM and serve as a “substitute for wilderness,” so that the area would be managed like a wilderness area without the potential statutory designation.

The purpose of this action is not to consider changing LUZs established in the existing forest plan and a proposal to develop a new LUZ is not consistent with this purpose. In addition, the proposed LUZ would match the restrictions associated with the existing RW LUZ. The Forest Service would manage both the suggested LUZ and the RW LUZ the same. Considering a LUZ that closely matches the RW LUZ would not add to the range of alternatives and therefore is not analyzed in detail.

**Modify Land Use Zone suitable uses** – Suitable uses are based on the suitable use tables in each LMP. Several commenters suggested that the suitable uses within individual LUZs should be changed or clarified.

The Settlement Agreement required the Forest Service to consider new LUZ allocations within the IRAs but not to reconsider the LUZs themselves. The LUZs apply forest-wide, and changing suitable uses within a LUZ is outside of the scope of the analysis.

Related to this alternative are requests by several commenters to identify criteria for determining when suitable uses are allowed “by exception”. As described by the LMP, some activities are allowed in BCNM and RW/EW land use zones by exception, further described as conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances. Those circumstances are evaluated at the project level, and any “by exception” project is subject to design criteria in LMP Part 3. Projects proposed in the IRA are also subject to the RACR prohibitions. “By exception” projects are discussed in more detail in the introduction section of Chapter 4. Adopting criteria for “by exception” activities is outside the scope of this analysis.

**Consideration of Additional IRAs** – The LMP amendment is focused on the 35 IRAs and the two undeveloped areas listed in the Settlement Agreement. Many commenters suggested additional areas that should be included, including the Condor Peak Undeveloped Area on the Angeles National Forest.

The LMP revision process considered and evaluated 118 IRAs and other undeveloped areas across the four forests (including the Condor Peak Undeveloped Area). Decisions associated with these areas were considered in the LMP revision appeal and later litigated. The resolution of the litigation (the Settlement Agreement) identified those IRAs and other undeveloped areas that would be reconsidered in the LMP amendment. Adding additional areas does not respond to the purpose and need.

**Conservation Group Monitoring Alternative** – The conservation groups proposed a monitoring alternative based on the April 2002 alternative filed by the conservation groups as part of the forest plan revision process. Monitoring as proposed by the conservation groups would be based on baseline studies and inventories of all resources, which would be replicated on a frequent basis and applied at the project level. Projects would not be implemented if the various studies and inventories did not show that conditions met the forest plan desired condition. Post project monitoring would be required for all projects. The full description of the alternative is available in the project records.

The Conservation Group Monitoring Alternative meets the requirements under the 1982 Planning Rule (36 CFR 219) by establishing intervals to evaluate how well objectives have been met and how closely management standards and guidelines have been applied through sampling of implementation. The expected precision and reliability of the monitoring process and the time when evaluation would be reported is disclosed.

This alternative requires the establishment of comprehensive baseline inventories and then forest plan monitoring of design criteria throughout each project or activity. The overall number, extensiveness, and required repetition of inventories with unclear methods and funding make this alternative infeasible. The Extensive Monitoring Alternative was developed as a feasible modified alternative to the Conservation Group Monitoring Alternative.

**Allocating IRAs to less restrictive Land Use Zones** – Several commenters suggested that the range of alternatives should include an alternative that changes the IRAs to less restrictive land use zones. The Los Angeles County Department of Public Works specifically requested that the area around Cogswell Reservoir adjacent to the West Fork and Westfork IRAs in the Angeles National Forest be allocated to Developed Area Interface (DAI) to facilitate the consideration of the area for an additional (future) sediment placement site.

The RACR provides that “The prohibitions and restrictions established in this subpart are not subject to reconsideration, revision, or rescission in subsequent project decisions or land and resource management plan amendments or revisions undertaken pursuant to 36 CFR part 219.” Many of the suitable activities in DAI are not suitable under RACR provisions and any alternative that allocates more area to DAI would be inconsistent with the RACR.

Agencies may consider alternatives that are inconsistent with laws or regulations if they are otherwise reasonable. In this case a less restrictive land use zone is not consistent with the project purpose and need and would have the potential for greater environmental harm to the roadless areas in questions.

## **Comparison of Alternatives**

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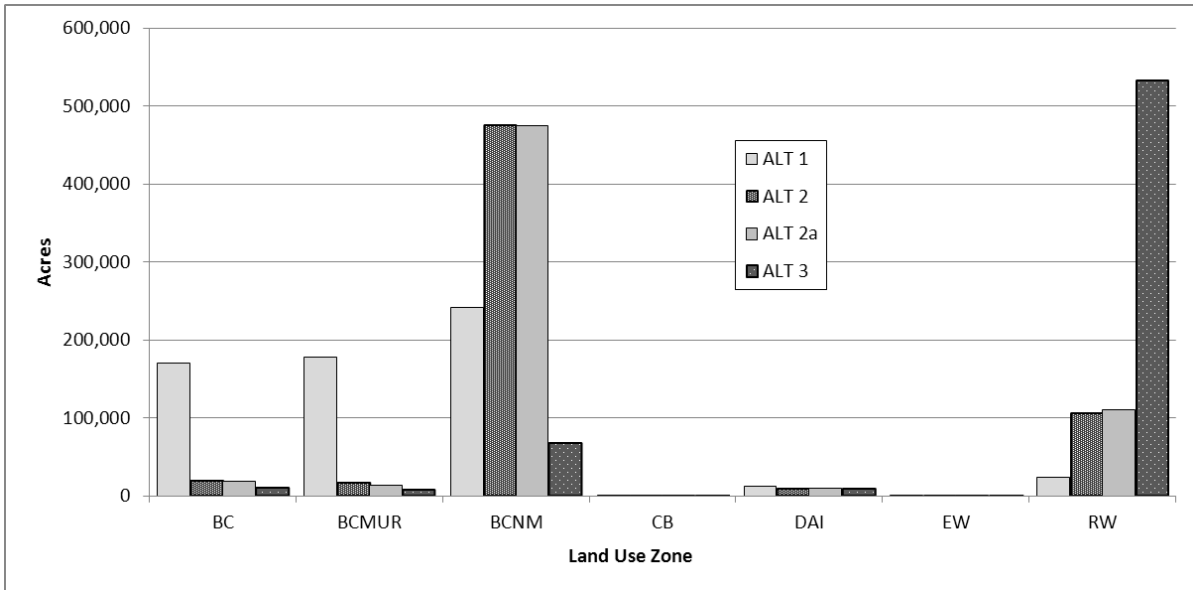
This section provides a summary of the effects of implementing each alternative. The comparison is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

The planning area includes all the National Forest System lands within the settlement agreement IRAs (614,130 acres) and adjacent National Forest System lands that were included in RW allocations (14,656 acres). The adjacent lands also include newly acquired National Forest System lands within the IRAs. The total area considered is 628,786 acres.

The alternatives differ in the amount of area allocated between BCNM and RW. As shown in Figure 1 and summarized in Table 4, the planning area is mainly zoned in BC, BCMUR, and BCNM under the current LMP (Alternative 1 – No Action). Under Alternative 2, the primary change is a large increase in BCNM and a smaller increase in RW. Alternative 3 allocates the majority of the area to RW. Alternative 2a increases the acreage of RW relative to Alternative 2. The CB and DAI zones both decrease slightly under Alternatives 2, 2a, and 3. A detailed summary of the alternatives at the IRA level is available in the project records.

Tables 5 and 6 compare the alternatives based on the issues and outcomes.

**Figure 1. Comparison of the LUZ allocations by Alternative**



**Table 4. Summary of LUZ Allocations within the Planning area for each Forest by Alternative**

<b>Land Use Zone</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 2a</b>	<b>Alternative 3</b>
	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
<b>Angeles</b>				
Back Country	2,566	1,001	828	314
Back Country Motorized Use Restricted	4,132	1,469	707	707
Back Country Non-Motorized	66,393	30,897	30,577	1,033
Critical Biological	326	12	0	0
Developed Area Interface	1,505	476	476	430
Existing Wilderness	8	8	8	8
Recommended Wilderness	0	41,065	42,333	72,437
<b>Cleveland</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	6,262	1,965	1,876	1,752
Back Country Motorized Use Restricted	6,321	4,124	2,919	2,885
Back Country Non-Motorized	68,308	34,974	34,732	6,118
Critical Biological	507	507	0	0
Developed Area Interface	3,031	1,325	1,293	1,288
Existing Wilderness	0	0	0	0
Recommended Wilderness	0	41,535	43,609	72,387
<b>Los Padres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	154,641	15,936	15,943	8,152
Back Country Motorized Use Restricted	164,697	10,112	10,112	3,399
Back Country Non-Motorized	86,521	379,810	379,803	59,727
Critical Biological	395	395	395	395
Developed Area Interface	7,032	7,032	7,032	7,032
Existing Wilderness	936	936	936	936
Recommended Wilderness	5,306	5,306	5,306	339,886
<b>San Bernardino</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	6,882	394	394	377
Back Country Motorized Use Restricted	3,018	816	173	191
Back Country Non-Motorized	20,332	29,692	29,692	155
Critical Biological	0	0	0	0
Developed Area Interface	1,440	773	773	773
Existing Wilderness	11	11	11	11
Recommended Wilderness	18,218	18,216	18,859	48,394



**Table 5. Comparison of the Land Use Zone alternatives based on the issues.**

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<b>Natural Resources Environment</b>				
<a href="#">Vegetation</a>	Limited treatment of vegetation under the current LMP and restrictions under the RACR.	Vegetation treatment reduced as area suitable for motorized access and commodity development is reduced.	Vegetation treatment reduced as area suitable for motorized access and commodity development is reduced.	Vegetation treatment reduced within the planning area as most areas are allocated to RW.
<a href="#">Wildlife</a>	Limited changes to individuals and habitat under the current LMP and restrictions under the RACR.	Reduced potential impact to individuals and habitat due to restrictions on future motorized access and commodity development. No change in ability to implement recovery plans. Higher protection of critical habitat primary constituent elements. Can maintain, enhance, and treat TES habitat.	Reduced potential impact to individuals and habitat due to restrictions on future motorized access and commodity development. No change in ability to implement recovery plans. Higher protection of critical habitat primary constituent elements. Can maintain, enhance, and treat TES habitat.	Reduced potential impact to individuals and habitat due to restrictions on future motorized access and commodity development. No change in ability to implement recovery plans. Highest protection of critical habitat primary constituent elements. Can maintain, enhance, and treat TES habitat.
<a href="#">Wildlife structures</a>	Wildlife improvements can be maintained in all areas subject to RACR restrictions.	No change in ability to maintain wildlife improvements.	Same effects as Alternative 2	Same effects as Alternative 2

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Botanical Resources</a>	No change from existing environment. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.	More habitats in restrictive LUZs. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.	More habitats in restrictive LUZs. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.	Most habitats in RW LUZs. Can maintain, enhance, and treat TES habitat. Can restore, protect and maintain essential features of critical habitat and areas with special management considerations.
<a href="#">Invasive Non-native Species</a>	No change from existing environment. Potential for introduction and spread of non-native species from roads, recreation and uses. Can implement management of non-natives.	Reduced potential for introduction and spread with reduced future motorized access or use. Can implement management of non-natives.	Reduced potential for introduction and spread with reduced future motorized access or use. Can implement management of non-natives.	Most potential for reduced introduction and spread with reduced future motorized access or use. Can implement management of non-natives.
<a href="#">Watershed Condition</a>	Some improvements in watershed condition over time as LMP standards are implemented.	Some improvements in watershed condition over time as LMP standards are implemented and future motorized access and development is limited.	Some improvements in watershed condition over time as LMP standards are implemented and future motorized access and development is limited.	Moderate improvements in watershed condition over time as LMP standards are implemented and future motorized access and development is restricted by RW allocations.
<a href="#">Air Quality</a>	Increased engine emissions and dust from driving. Increased emissions from prescribed fire and wildfire.	Same effects as Alternative 1	Same effects as Alternative 1	Same effects as Alternative 1

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Special Interest Areas</a>	No change in current management.	Same effects as Alternative 1	Same effects as Alternative 1	Potential conflict with interpretative purpose of Sierra Madre SIA.
<b>Social and Economic Environment</b>				
<a href="#">Heritage Resources</a>	No change in current management. Heritage resources protected through implementation of LMP standards and other legal requirements.	No change in current management. Heritage resources protected through implementation of LMP standards and other legal requirements. Less potential for disturbance as future uses are limited by more restrictive LUZs.	Same effects as Alternative 2	Same effects as Alternative 2
<a href="#">Tribal and Native American Interests</a>	No change in current management.	Greater protection may favor values held to be of importance to Native American communities. Restrictions on future motorized access may limit access to sacred places.	Same effects as Alternative 2	Same effects as Alternative 2
<a href="#">Recreation</a>	No change in existing uses.	Minimal change in existing uses. Future uses focused on non-motorized activities.	Minimal change in existing uses. Future uses focused on non-motorized activities.	Moderate change in existing uses (mountain biking). Future uses focused on non-motorized activities.

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Recreational user access</a>	No change to existing access.	No change to existing access. New road access limited by more restrictive LUZs and the RACR. Mountain bike access accommodated in high use areas.	No change to existing access. New road access limited by more restrictive LUZs and the RACR. Mountain bike access accommodated in high use areas.	Minor change to existing motorized access. New road access limited by more restrictive LUZs, and the RACR. Mountain bike access prohibited in RW areas.
<a href="#">Hunting</a>	No change in current use or level of access.	No change in current use or level of motorized access. Use of mechanized equipment prohibited in RW areas. Quality of experience may be increased due to potential for less people with BCNM.	No change in current use or level of motorized access. Use of mechanized equipment prohibited in RW areas. Quality of experience may be increased due to potential for less people with BCNM.	Minor change in current level of motorized access. Use of mechanized equipment prohibited in RW areas. Quality of experience may be higher due to potential for less people in RW.
<a href="#">Tourism</a>	No change in tourism.	No change in tourism.	No change in tourism.	No change in tourism.
<a href="#">Accessibility for Americans with Disabilities</a>	No change in current access.	Same effects as Alternative 1	Same effects as Alternative 1	Minor change in current access.
<a href="#">Wild and Scenic Rivers (W&amp;SR)</a>	No change in current management. Eligible rivers managed under LMP direction to protect eligibility.	Some segments allocated to more restrictive LUZs. Eligible rivers managed under LMP direction to protect eligibility.	Some segments allocated to more restrictive LUZs. Eligible rivers managed under LMP direction to protect eligibility.	More segments allocated to the more restrictive RW LUZ. Eligible rivers managed under LMP direction to protect eligibility.
<a href="#">Scenic Integrity</a>	No change in current management.	More landscape managed at high and very high SIO. Greater focus on naturally appearing landscape.	More landscape managed at high and very high SIO. Greater focus on naturally appearing landscape.	Most areas managed at very high SIO for naturally appearing landscapes.

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Law enforcement (LE) and emergency response, border security, and illegal uses</a>	No change in current management.	No change in emergency response or illegal uses. Border security continued under existing MOU. Administrative approval required for non-emergency LE motorized access to RW areas.	Same effects as Alternative 2	Same effects as Alternative 2
<a href="#">Economics</a>	No change.	Limited change due to increased restrictions, but most development already limited by RACR. Management costs in RW would be higher.	Same effects as Alternative 2.	Same effects as Alternative 2
<b>Facility Operations and Maintenance</b>				
<a href="#">Roads and Trails</a>	Roads open to public travel as shown on the MVUM. Permitted roads limited to administrative use.	No change in open public roads. Some permitted roads included in RW allocations. Trail maintenance costs in RW would be higher.	No change in open public roads. A closed FS road and some permitted roads included in RW allocations. No BCNM trail corridors in Salt Creek and Fish Canyon, precluding future mountain bike use. Trail maintenance costs in RW would be higher	Limited change in open public roads. Many permitted roads included in RW allocations. Mountain bike access prohibited in RW areas. Trail maintenance costs in RW would be higher.

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Road and Trail maintenance</a>	Funding expected to decline and importance of volunteer maintenance expected to increase.	No change in funding or importance of volunteers.	Same effects as Alternative 2. Source of volunteer workers could shift as use shifts to non-mechanized users in RW areas.	No change in funding or importance of volunteers. Source of volunteer workers could shift as use shifts to non-mechanized users in RW areas.
<b>Commodity and Commercial Uses</b>				
<a href="#">Grazing Permits</a>	No change in grazing use.	No change in grazing use.	No change in grazing use.	No change in grazing use.
<a href="#">Locatable minerals</a>	No changes to current uses. New road access subject to valid existing rights under the RACR.	Same effects as Alternative 1	Same effects as Alternative 1	Same effects as Alternative 1
<a href="#">Special Uses</a>	No change in current management. Uses allowed in BCNM areas by exception.	No change to existing uses under current permits. Less area suitable for special uses.	No changes to existing uses under current permits. Some existing uses included in RW allocations. Continuation of the use under a new permit could be affected by RW allocation. Less area suitable for special uses.	No changes to existing uses under current permit. Some existing uses included in RW allocations. Continuation of the use under a new permit could be affected by RW allocation. Less area suitable for special uses.

<b>Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 2a</b>	<b>Alternative 3</b>
<b>Lands (Real Estate)</b>				
<a href="#">Private lands</a>	No change in existing management. Access to private land based on ANILCA.	Same effects as Alternative 1	Same effects as Alternative 1	No change in existing management. Access to private land based on ANILCA. Access through RW would need to be consistent with the wilderness act.
<b>Wildland Fire and Community Protection</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 2a</b>	<b>Alternative 3</b>
<a href="#">Fire Suppression in IRAs</a>	No change in fire suppression.	No change in access on existing roads and no changes in activities allowed. Administrative approval needed for motorized use in RW.	No change in access on existing roads and no changes in activities allowed. Administrative approval needed for motorized use in RW.	Limited change in road access on existing roads and no changes in activities allowed. Administrative approval needed for motorized use in RW.
<a href="#">Fuels management</a>	No change in fuels management.	Minimal changes in fuels management. Fuels treatment in RW would likely shift to less intensive treatments.	Minimal changes in fuels management. Fuels treatment in RW would likely shift to less intensive treatments.	Moderate changes in fuels management. Fuels treatment in RW would likely shift to less intensive treatments.

Issue	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<a href="#">Fire Cooperators</a>	No change on cooperators. Operations on NFS lands subject to control of Forest Service incident commanders operating in unified command.	Same effects as Alternative 1	Same effects as Alternative 1	Same effects as Alternative 1
<b>Coordination with other public planning efforts</b>				
<a href="#">Consistency with other plans</a>	Consistent with other federal, state, and local plans.	Same effects as Alternative 1	Same effects as Alternative 1	Same effects as Alternative 1



**Table 6. Comparison of Monitoring Alternatives**

	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
<a href="#"><u>Monitoring Strategy</u></a>	Three part approach. Part 1 focuses on monitoring effects of management relative to plan objectives. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a 10% sample.	Similar to current monitoring. Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a minimum of one project per category.	Maintain three part strategy with more use of baseline inventories using a sampling approach. Part 1 focuses on monitoring effects of management relative to plan objectives, with indicators updated for current metrics. Part 2 reports accomplishment. Part 3 monitors implementation of LMP standards at the project level based on a 20% annual sample of new projects and 20% sample of ongoing projects.
Part 1 Monitoring 5 Year Cost	\$120,620	\$170,940	\$403,300
Part 2 Monitoring 5 Year Cost	\$1,850	\$1,850	\$1,850
Part 3 Monitoring Annual Cost	\$52,910	\$19,240	\$241,980
<a href="#"><u>Efficiency</u></a>	Some impacts on other appropriated funds for wildlife, botany and watershed to support monitoring.	Annual monitoring within agency funding levels. Some impact to other funds for 5 year monitoring.	Monitoring supplemented by other appropriated funds that would otherwise support goods and services throughout all resource areas.

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## CHAPTER 3. AFFECTED ENVIRONMENT

This Chapter summarizes the physical, biological, social, and economic environments of the planning area and the effects of implementing each alternative on that environment. It also presents the scientific and analytical basis for the comparison of alternatives presented in the alternatives chapter. Information is generally summarized at the forest level. Detailed information about the specific IRAs being evaluated can be found in Appendix 2. The IRAs included in this analysis are listed by forest in Table 7. Overview maps of the IRAs are shown in Figures 2 through 7.

**Table 7. IRAs within the Four Southern California National Forests**

<b>FOREST</b>	<b>INVENTORIED ROADLESS AREAS</b>
<b>Angeles</b>	Fish Canyon, Red Mountain, Salt Creek, Tule, West Fork, Westfork
<b>Cleveland</b>	Barker Valley, Caliente, Cedar Creek*, Coldwater, Eagle Peak, Ladd, No Name, Sill Hill, Trabuco, Upper San Diego River Gorge*
<b>Los Padres</b>	Antimony, Black Mountain, Cuyama, Diablo, Dry Lakes, Fox Mountain, Garcia Mountain, Juncal, Machesna Mountain, Madulce Buckhorn, Quatal, Sawmill Badlands, Spoor Canyon, Tequepis, White Ledge
<b>San Bernardino</b>	Cactus Springs B, Cucamonga B, Cucamonga C, Pyramid Peak A, Raywood Flats B
<b>Angeles and Los Padres</b>	Sespe Frazier
*Cedar Creek and Upper San Diego River Gorge are undeveloped areas the public proposed for wilderness designation and they were analyzed for potential wilderness designation in the 2006 FEIS supporting the revised forest plans. They are considered and counted as IRAs in this analysis. However, the Roadless Area Conservation Rule does not apply to these two areas.	

**Figure 2. Overview Map of the Los Padres National Forest (North)**

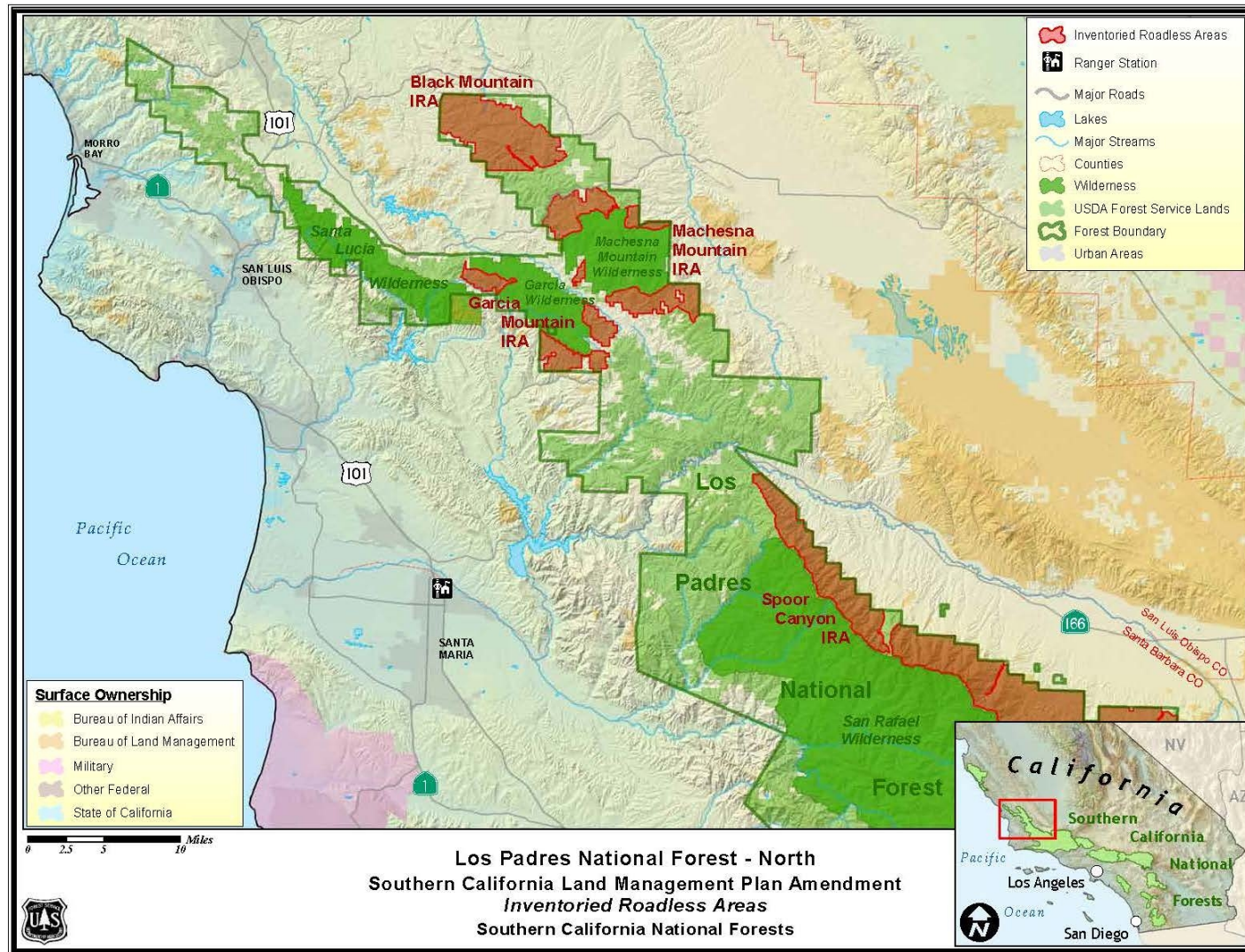


Figure 3. Overview Map of the Los Padres National Forest (South)

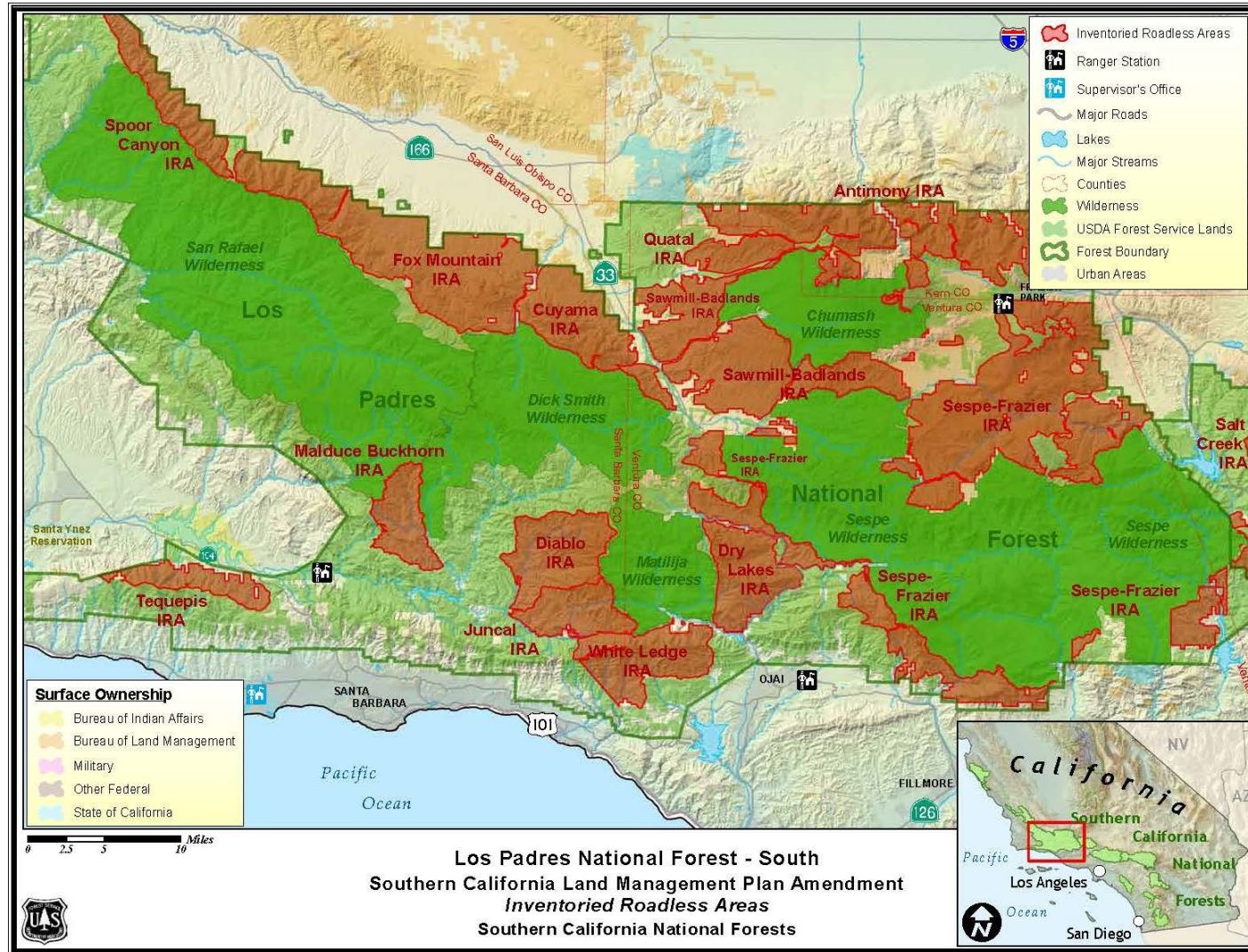


Figure 4. Overview Map of the Angeles National Forest

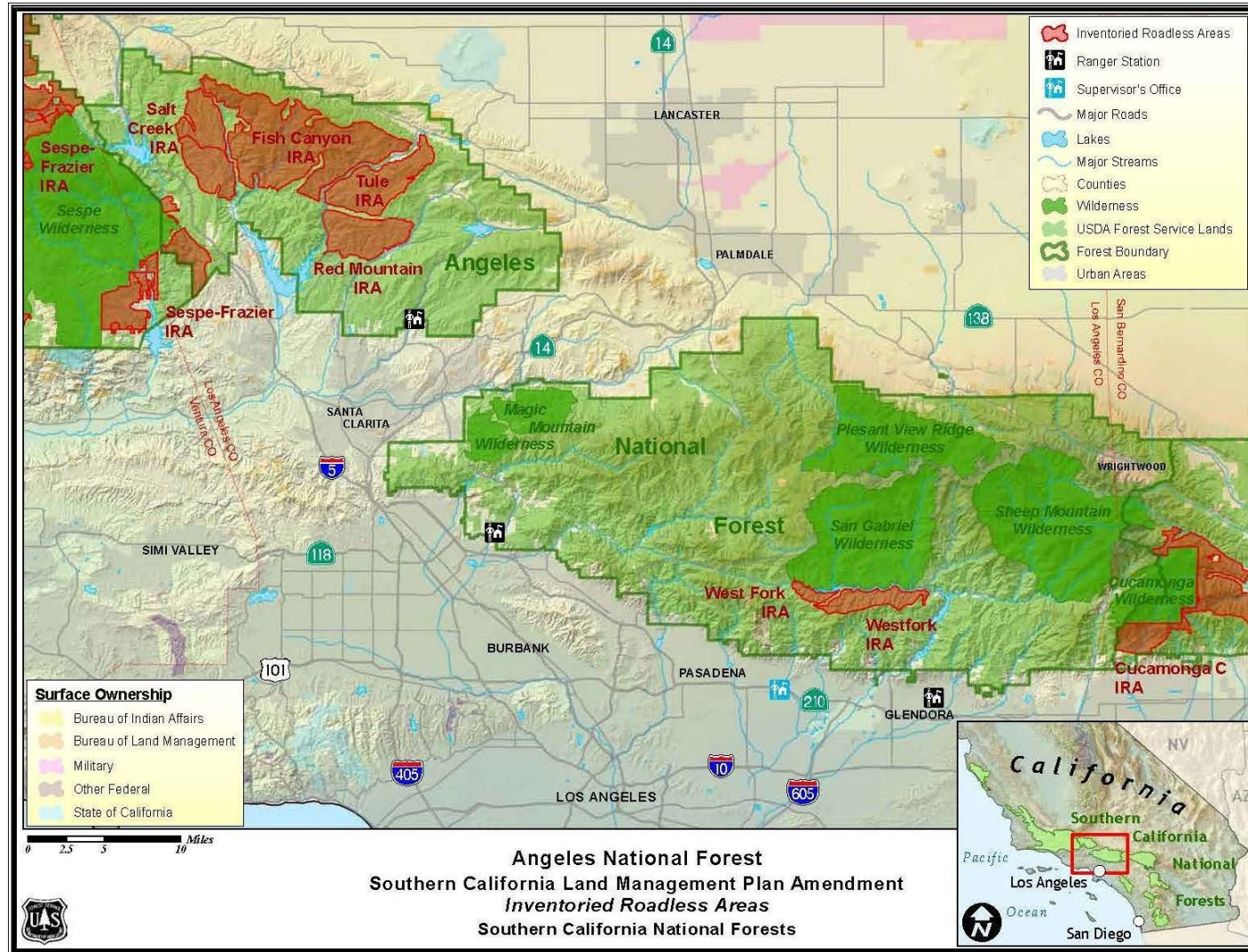
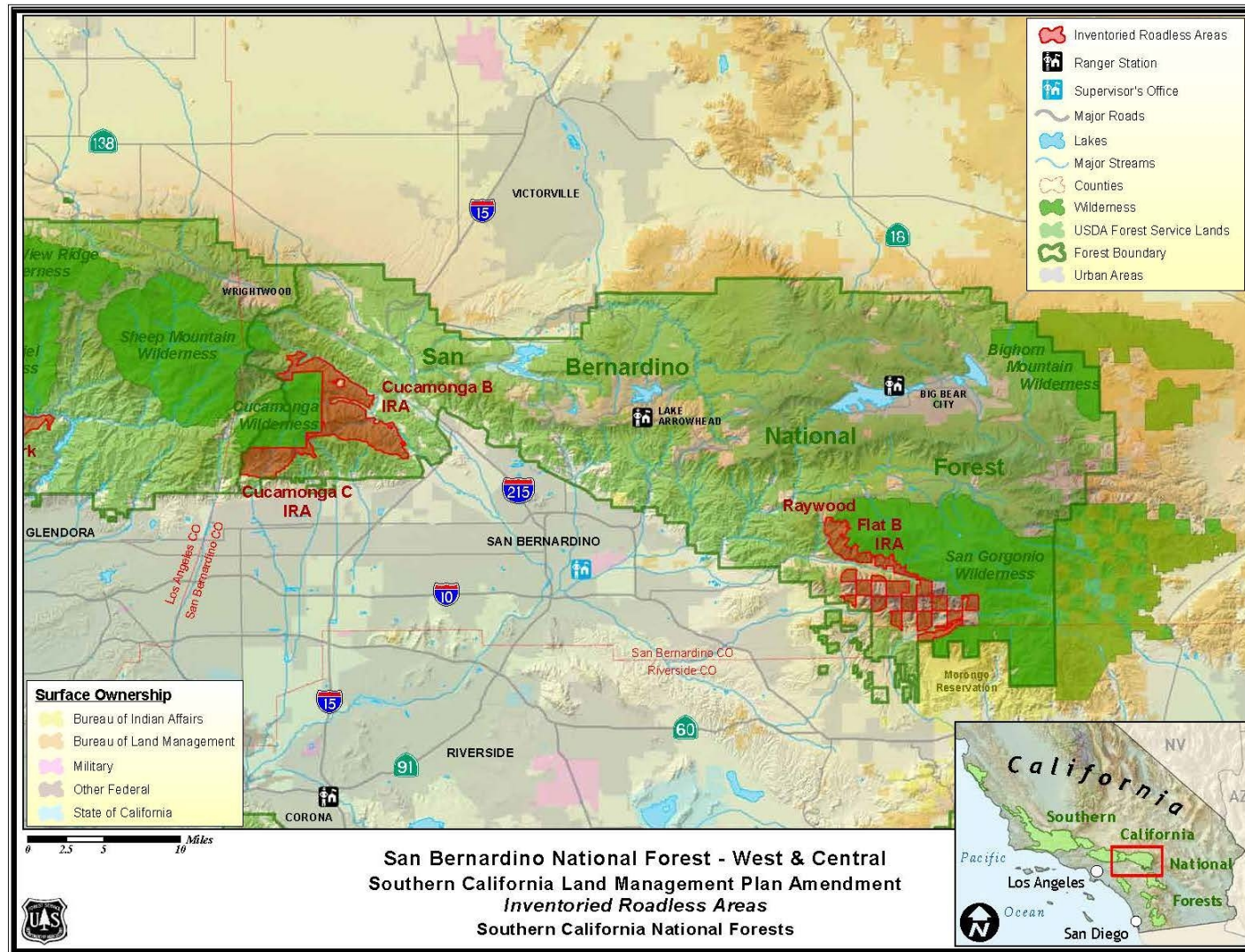


Figure 5. Overview Map of the San Bernardino



**Figure 6. Overview Map San Bernardino National Forest (South) and Cleveland National Forest (North)**

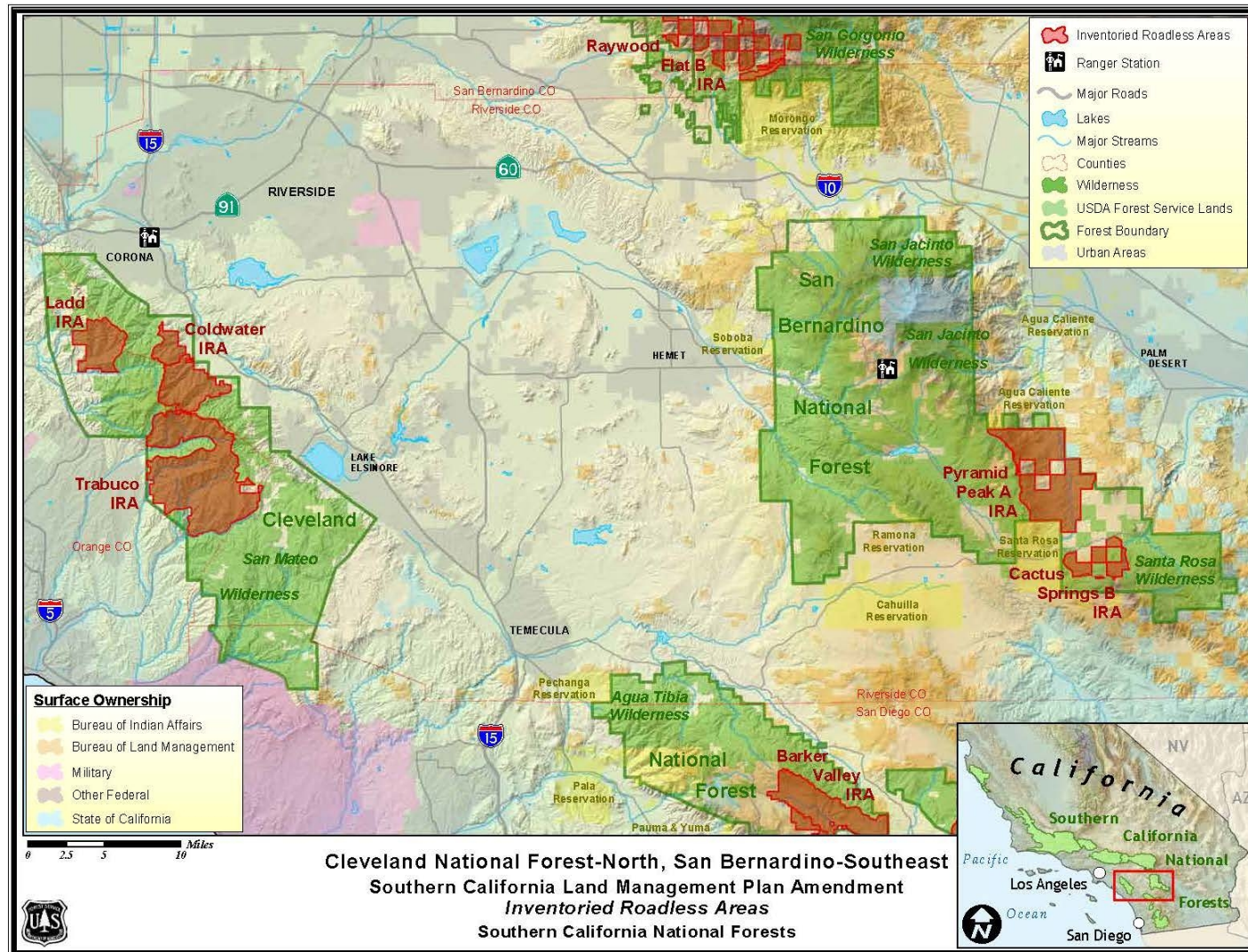
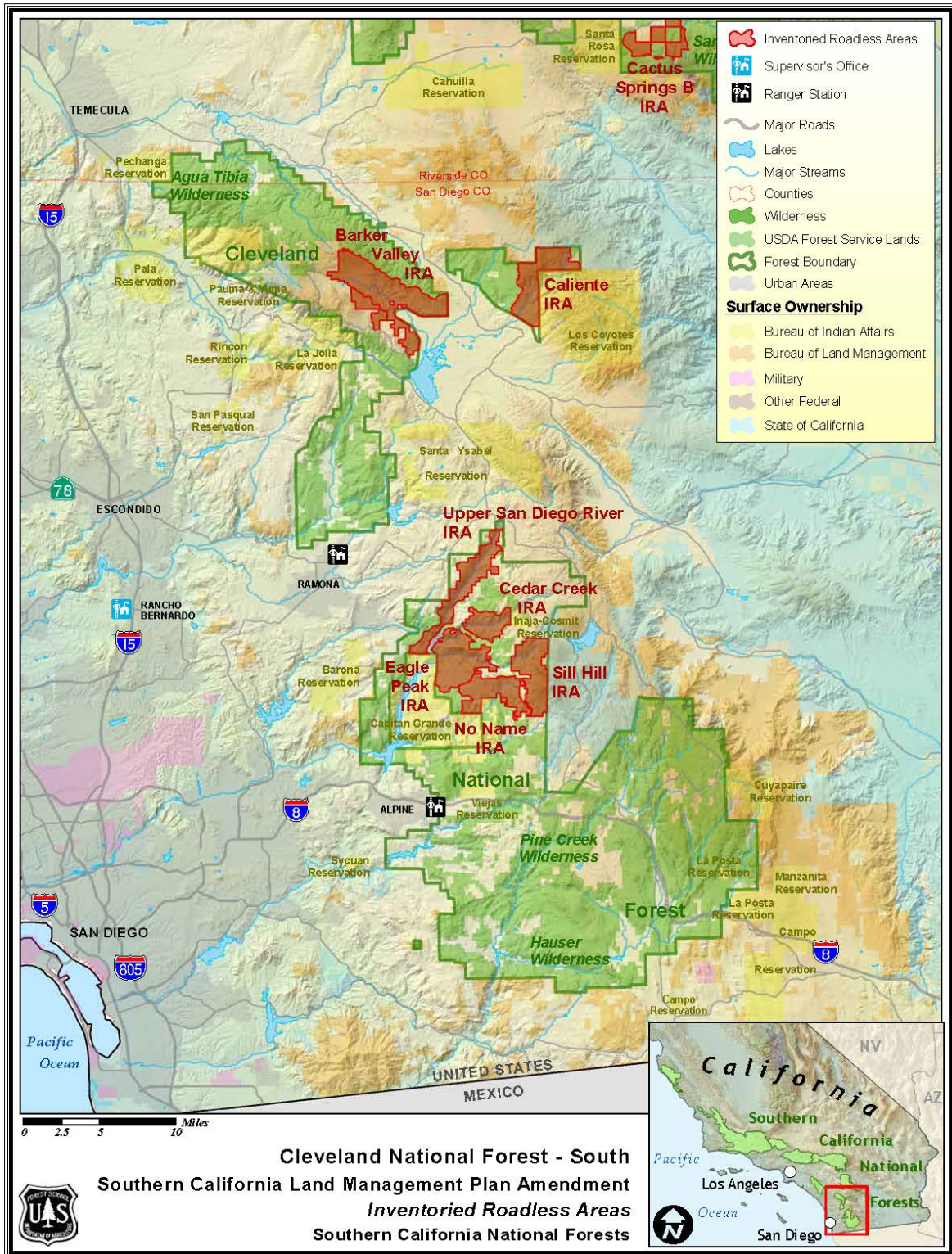




Figure 7. Overview Map Cleveland National Forest (South)



## Natural Resources Environment

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### Biological Resources

The four southern California national forests lie within a bioregion considered by Conservation International to be one of the world's 25 biodiversity "hotspots". These "hotspots" are defined as areas where exceptional concentrations of endemic species are undergoing exceptional loss of habitat (Myers *et al.* 2000). High vegetation diversity, unique ecological communities found nowhere else, and exceptionally high numbers of endemic plant species characterize this area (USDA Forest Service 2006).

The four forests play an important regional role in maintaining large blocks of wildlife and plant habitat. They also contain areas that are the only remaining habitat refugia for species imperiled by the loss or degradation of habitat off-forest. Combined with a mix of local, state, federal and private lands, the four forests form a regional system of open space and habitat preserves within one of the most highly urbanized landscapes in the United States.

The 37 Inventoried Roadless Areas (IRAs) in this analysis play an important role in this regional system by providing habitat for a diversity of species such as wide-ranging carnivores, localized species and threatened, endangered and sensitive wildlife and plant species. Whether managed alone or in combination with Critical Biological Zones and/or special designations such as Wilderness, Research Natural Areas and Special Interest Areas, these IRAs provide biological strongholds that have typically not been exposed to the same levels of habitat degradation and loss that has occurred across other more utilized areas of the national forests. Native plant and animal communities are generally more intact in these IRAs than in roaded areas of similar size resulting in the presence and abundance of species more likely to be affected by human disturbances. Across the four forests, these IRAs play a key role in maintaining native species and biodiversity because they provide conditions suitable for survival that are declining elsewhere.

Biological resources include vegetation conditions, wildlife, botany, and invasive species.

### Vegetation Conditions

#### Province Vegetation

The "Southern California Mountains and Foothills Assessment" (Stephenson and Calcarone 1999) partitions the four southern California national forests into six major landscapes using internally repeating combinations of characteristic vegetation types. Factors explaining changes in vegetation between landscapes are complex, but in general are influenced by a few organizing variables: increasing distance from the coast, increasing elevation, latitude, topography, and fire regime. All of these landscapes, except for the Monterey Coast Landscape, occur in one or more of the IRAs analyzed in this document. For the description and analysis of vegetation, twenty seven Wildlife Habitat Relationship (WHR) types (Mayer and Laudenslayer 1988) were used (Table 8).

**Table 8. Wildlife Habitat Relationship Vegetation Types Used in the Analysis**

WHR vegetation types
Annual grassland
Barren
Blue oak woodland
Blue oak woodland-pine
Chaparral (combines mixed chaparral and chamise/redshank chaparral)
Closed-cone pine
Coastal oak woodland
Coastal sage scrub
Cropland
Desert scrub
Desert wash
Eastside pine
Jeffrey pine
Juniper
Montane chaparral
Montane hardwoods
Montane hardwoods-conifer
Montane riparian
Pinyon-juniper
Ponderosa pine
Sagebrush
Sierran mixed conifer
Subalpine conifer
Urban
Valley floor riparian
Valley oak woodland
White fir

### Province Landscapes

The “Coastal Foothills Landscape” generally occurs below elevations of 3,000 feet on coastal-facing slopes, although it reaches well inland on Los Padres National Forest. Topography is usually steep where chaparral dominates but tends toward rolling foothills and valleys where oak woodlands, coastal sage scrub and annual grasslands are prevalent. Coastal vegetation types include coastal sage scrub, coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) woodlands and forests and scattered annual grasslands. Inland blue oak (*Q. douglasii*) and valley oak (*Q. lobata*) savannas, woodlands and forests are significant components of this landscape. Wildlife Habitat Relationship (WHR) types analyzed for this landscape include: chaparral, blue oak woodlands, coastal oak woodlands (e.g. coast live oak and Engelmann oak), blue oak woodland-foothill pine, valley oak woodlands, coastal sage scrub, valley foothill riparian and California annual grasslands.

With regard to fire regime, chaparral and coastal sage scrub historically burned in infrequent (Van de Water and Safford 2011) large-scale, high-intensity fires. The oak types, on the other

hand, are more likely to burn in low- to moderate-intensity surface fires carried by the omnipresent herbaceous understory.

The “Lower Montane Landscape” is best developed on generally steep, coastal-facing slopes between elevations of 3,000 and 5,000 feet. Chaparral is the dominant vegetation but within the shrubland expanses are numerous stands, and occasional well-developed forests, of bigcone Douglas-fir (*Pseudotsuga macrocarpa*), Coulter (*Pinus coulteri*) and knobcone pine (*P. attenuata*) woodlands, canyon live and California black oak (*Q. kelloggii*) forests as well as isolated populations of Tecate (*Cupressus forbesii*), Cuyamaca (*C. stephensonii*) and Sargent cypress (*C. sargentii*).

The pines and cypresses experience infrequent, stand-replacing fires and regenerate entirely from seeds stored in closed cones (Borchert 1985, Ne’eman et al. 1999). Bigcone Douglas-fir often grows in relatively fire-resistant locations (steep unstable slopes, protected canyons) and crown sprouts in response to moderate intensity fires (Minnich 1977). Canyon live oak (*Q. chrysolepis*) and California black oak are easily killed by fire but are prolific post-fire stump-sprouters. Wildlife Habitat Relationship types represented in IRAs of this landscape are montane hardwoods, montane hardwood-conifer forests, closed-cone pines and chaparral.

With increasing elevation inland from the coast, precipitation increases while winter temperatures decrease. This climate creates conditions for the development of the “Montane Conifer Landscape” which becomes increasingly prevalent at elevations above 5,000 feet, extending up to elevations of 8,500 feet in the San Bernardino Mountains. Jeffrey pine (*P. jeffreyi*) and ponderosa pine (*P. ponderosa*) forests, or a mix of the two species, are important components of this landscape. Mixed conifer forests are situated in moister settings such as north-facing slopes. Large patches of montane chaparral grow on the shallower soils at higher elevations or as early successional patches generated by wildfires. Significant areas of this landscape are dominated by monotypic black oak and canyon live oak forests that often occur as inclusions in a complex mosaic with other forest types.

Pre-suppression fires (fires that occurred prior to fire suppression activities) in this landscape apparently were frequent (Minnich et al. 1995) low and moderate severity burns with smaller patches of high-severity crown fires. Since 2000, wildfires have been increasingly intense in these forests and have caused significant losses of mature forests in the Cuyamaca (Cedar Fire), San Gabriel (Station Fire) and San Bernardino Mountains (Old Fire). High fuel loadings, resulting from successful fire suppression, combined with warming due to climate change likely will make stand-replacing fires even more frequent in the conifer forests of this landscape (Westerling and Bryant 2008). Wildlife Habitat Relationship types represented in this landscape include Jeffrey pine, ponderosa pine, Sierran mixed conifer, white fir (*Abies concolor*), montane chaparral, montane hardwoods and montane hardwood-conifers.

The “Subalpine/Alpine Landscape” occupies terrain above elevations of 8500 feet and is patchily distributed over the province, primarily in the San Gabriel and San Bernardino Mountains. Mountaintops where these vegetation types occur receive substantial precipitation in the form of snow, but the growing season is relatively short because cold temperatures often persist well into summer. Fires are mostly lightning-caused and infrequent. Subalpine conifer is the WHR type (Van de Water and Safford 2010).

The most arid, interior landscape is the “Desert Montane Landscape”. Singleleaf pinyon (*P. monophylla*) woodlands dominate this landscape across the province but there also are extensive

areas of juniper (*Juniperus californica* and *J. osteosperma*) as well as locally abundant Joshua tree (*Yucca brevifolia*) woodlands. Intermixed with pinyon woodlands are shrubland patches of Great Basin sagebrush (*Artemisia tridentata*), rabbit brush (*Chrysothamnus naseosus*) and occasionally creosote (*Larrea tridentata*). Fires in this landscape are infrequent and usually stand-replacing (Wangler and Minnich 1996). Wildlife Habitat Relationship types include sagebrush, desert scrub, desert wash, juniper, eastside pine and pinyon-juniper.

### Analysis Methodology

Vegetation was analyzed using the 27 Wildlife Habitat Relations (WHR) types (Table 8). Two-way Indicator Species Analysis (TWINSPAN) (Hill 1979) was used to group the IRAs into the Province Landscapes described above. Many clustering techniques were available to accomplish this grouping but TWINSPAN was chosen because of its analysis flexibility.

First, acres of each WHR vegetation type in an IRA were converted to the proportion of each WHR type within the IRA. Proportions then were subjected to TWINSPAN to classify IRAs into groups having similar composition and proportions of WHRs. Seven cut levels (major intervals of WHR proportions) were used in the analysis: 0.01, 0.05, 0.10, 0.20, 0.38, 0.62, and 0.88. Mixed chaparral and chamise/redshank chaparral types were combined into a single “chaparral” type for the analysis.

### Results of the Two-way Indicator Species Analysis

Twenty-seven WHR vegetation types occur in the IRAs. Not surprisingly, chaparral comprised 63.3% of the total area followed by pinyon-juniper which made up 13.7%. Montane hardwoods were next with 5.4% while the remaining 24 types had percentages less than 2.2%.

Two-way Indicator Species Analysis resulted in four distinct IRA groups.

**Group 1.** Average chaparral cover in Group 1 is 47.1%. This group consists of seven IRAs that, in addition to chaparral, were dominated by three distinctive types: montane hardwoods (25.4%), Sierran mixed conifer (11.4%) and montane hardwood-conifer (9.5%). In general five of these IRAs (West Fork, Westfork, Cucamonga B, Cucamonga C and Raywood Flat B) occupy upper elevation, coastal-facing slopes. Exceptions are Sill Hill and Spoor Canyon which are farther inland than the other five IRAs. These IRAs generally fit best in the Lower Montane Landscape.

**Group 2.** Average chaparral cover in this group is the second highest at 68.4%. There are six IRAs in this group: Coldwater, Eagle Peak, Trabuco, Upper San Diego River, Diablo and Tequepis. All had relatively high cover of coastal sage scrub (12.6%) and coastal oak woodlands (11.2%) in common, making them members of the Coastal Foothills Landscape.

**Group 3.** The six IRAs in this group have the lowest average chaparral cover (37.5%) of the four groups and all occupy desert settings or border desert areas as indicated by the high average cover of pinyon-juniper (37.7%) and sagebrush (6.3%). Eastside pine and juniper also were confined to this group. IRAs in this group are all on the Los Padres National Forest and include: Antimony, Cuyama, Fox Mountain, Quatal, Sawmill-Badlands and Sespe-Frazier (LPNF). These IRAs belong to the Desert Montane Landscape.

**Group 4.** This group had the largest number of IRAs (20) as well as the highest average cover of chaparral (85.5%). In fact, the high cover of chaparral separated this group from the others as well as the absence of distinctive minor WHR types. IRAs belong to both the Coastal Foothills and Lower Montane Landscapes and are as follows: Tule, Sespe-Frazier (ANF), Salt Creek, Red

Mountain, Fish Canyon-Salt Creek, Fish Canyon, Barker Valley, Caliente, Cedar Creek, Ladd, No Name, Black Mountain, Dry Lakes, Garcia Mountain, Juncal, Machesna Mountain, Madulce-Buckhorn, White Ledge, Cactus Springs B and Pyramid Peak A.

Tree Management Indicator Species (MIS) Analysis

The four forests have a list of seven tree Management Indicator Species (MIS, Tables 9 and 10). These species were selected because changes in their distributions and abundances in part reflect the consequences of management activities (36 CFR [Code of Federal Regulations] 219.19(a) (1), 1982). Therefore they are monitored to provide feedback for on-going management activities and policies (36 CFR 219(a) (6), 1982). Selection and justification of the MIS can be found in the FEIS pages 72 to 81. Plant MIS were developed under the 1982 National Forest System Land and Resource Management Planning Rule (1982 Planning Rule) (36 CFR 219). Guidance regarding MIS tree species is set forth in the LMP and directs resource managers to: 1) analyze the effects of proposed projects on the distribution and abundance of each tree MIS, and 2) monitor populations trends of tree MIS at the province (four-forest) scale. The LMP direction is to maintain or improve habitat conditions to sustain healthy populations of these MIS.

**Table 9. MIS Tree Species from the LMP**

Common Name	Latin Name	Forest Occurrence
Bigcone Douglas-fir	<i>Pseudotsuga macrocarpa</i>	ANF, CNF, LPNF, SBNF
Coulter pine	<i>Pinus coulteri</i>	ANF, CNF, LPNF, SBNF
White fir	<i>Abies concolor</i>	ANF, CNF, LPNF, SBNF LPNF
Black oak	<i>Quercus kelloggii</i>	ANF, CNF, LPNF, SBNF
Blue oak	<i>Quercus douglasii</i>	LPNF
Engelmann oak	<i>Quercus engelmannii</i>	CNF
Valley oak	<i>Quercus lobata</i>	LPNF

**Table 10. Acreage of Tree MIS in IRAs on each Forest. (Black oak and white fir are not presented because they often occur in mixed-species stands.)**

Common Name	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<b>Bigcone Douglas-fir</b>	1,667	3,375	3,321	6,440
<b>Coulter pine</b>	---	596	2,092	230
<b>Blue oak</b>	---	---	2,763	---
<b>Engelmann oak</b>	---	703	---	---
<b>Valley oak</b>	---	---	48	---

**Wildlife**

The four southern California national forests have the largest number of federally endangered, threatened, proposed, and candidate wildlife species across all NFS lands. To date, the Angeles (ANF), Cleveland (CNF), Los Padres (LPNF) and San Bernardino National Forests (SBNF)

support habitat for 20 endangered, 11 threatened, 2 candidate wildlife species, and designated critical habitat for 17 wildlife species. Table 11 summarizes the most current list of threatened, endangered, proposed, and candidate (TEPC) wildlife species.

Several federal listing changes have occurred since the LMP was approved in 2006. These changes include the delisting of the bald eagle (*Haliaeetus leucocephalus*) and the brown pelican (*Pelicanus occidentalis*). The bald eagle was delisted on August 8, 2007 (FR Vol. 72 No.130; 37345-37372). Although they are delisted, bald eagles are still protected by the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and the Lacey Act. The brown pelican was delisted on November 11, 2009 (FR Vol.74 No.220; 59444-59472). This species continues to be managed as a Region 5 Sensitive wildlife species. Changes also include the inclusion of the mountain yellow legged frog (*Rana muscosa*) as a state endangered species. On February 2, 2012, California Fish and Game Commission amended the Fish and Game Code Section 2075.5 (Section 670.5, Title 14, California Code of Regulations), to add the southern mountain yellow-legged frog to the list of endangered species.

Table 11 shows the TEPC wildlife species that occur within the 37 IRAs. Animal occurrences were considered overlapping with an IRA if there was Geographical Information Systems (GIS) data that showed an individual completely within GIS generated IRA boundary. If animals had occurrences adjacent to an IRA boundary, they were not considered as overlapping with the IRA. It is possible that an animal is more widespread than is indicated from the limited GIS data available and may actually occur on other IRAs. However, for analysis consistency, only regional and national databases such as FWS GIS data, CNDDDB and NRIS databases were used.

The four forests also support designated critical habitat for 17 threatened and endangered species. Table 12 identifies the national forest and various species' critical habitat that the forest supports. Critical habitat for the mountain yellow-legged frog (*Rana muscosa*) has been designated since the 2006 Forest Plan. Critical habitat was designated on September 14, 2006 (FR Vol.71 No. 187; 54344-54386). Some critical habitat designations have been revised but no designations have been removed by the US Fish and Wildlife Service.

The species that have known occurrences within the 37 IRAs include: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, Conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow legged frog, Santa Ana sucker, southwestern willow flycatcher, steelhead trout (southern California Distinct Population Segment - DPS), vernal pool fairy shrimp and peninsular bighorn sheep.

Species whose occurrences do not overlap with any of the 37 IRAs are not affected by the proposed action. Therefore, there are no effects to the following species: California least tern, desert tortoise, giant kangaroo rat, Hermes Cooper butterfly, Kern primrose sphinx moth, Longhorn fairy shrimp, marbled murrelet, , Quino checkerspot butterfly, San Bernardino kangaroo rat, San Joaquin kit fox, Smith blue butterfly, southern steelhead (South/Central California coast), Stephen's kangaroo rat, southern sea otter, Stellar sea lion, tidewater goby, unarmored threespine stickleback, western yellow billed cuckoo and western snowy plover. These species will not be discussed any further in this document.

The four forests also support numerous critical habitats for wildlife species (Table 12). However, only certain species actually have critical habitats that overlap with IRAs that are considered in this analysis. Critical habitats that do not overlap with IRAs are not affected by the proposed action. Critical habitat for southern steelhead trout (southern California DPS) is shown

in miles, not acres. The following species have critical habitats that overlap with the 37 IRAs: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow-legged frog, San Bernardino kangaroo rat, southwestern willow flycatcher, southern steelhead (Southern California DPS), and vernal pool fairy shrimp.

The U.S. Fish and Wildlife Service completed formal consultation on the revised 2006 Forest Land Management Plan for all four forests and issued a revised biological opinion on September 30, 2013. The biological opinion analyzes the effects to federally listed wildlife species from ongoing activities throughout Forest lands and stream habitat.

The National Marine Fisheries Service (NMFS) completed formal consultation on the revised 2006 Forest Land Management Plan (LMP) for both the Los Padres National Forest (LPNF) and Cleveland National Forest (CNF). NMFS' biological opinions were issued to CNF and LPNF on May 10, 2013, and August 2, 2013, respectively, according to court-ordered deadlines.

The NMFS' biological opinions analyze adverse effects to federally listed steelhead from ongoing activities throughout Forest lands and stream habitat accessible to endangered (Southern California Coast) and threatened (South-Central California Coast) steelhead in southern portions of California. The ongoing activities for the CNF included: recreational activities, road use and maintenance, and exotic species removal. The ongoing activities for the LPNF included: visitor use, off-highway vehicle routes and the hiking-trails network, transportation and facility maintenance and use, and recreation and administrative facilities and use of those facilities.

The LMPs will continue for the next 13 years for each Forest; by the end of that term, LPNF and CNF are expected to have developed a revised (or "new") LMP. Accordingly, the effective life of the two biological opinions extends to December 31, 2026.

In addition to threatened and endangered species, Region 5 (R5) of the Forest Service also maintains a sensitive species list (Table 13). These species' habitats are managed so that populations maintain viability and do not become federally listed. Table 13 is based on the sensitive species list that was current when the SEIS analysis began in August 2012. A new Regional Forester's Sensitive Species List was released on June 30, 2013. The SEIS team requested an exception to using the June 2013 list since the NEPA analysis was nearly complete when the new list became effective (USFS SoCal Province, July 23, 2013). An exception was granted by the Regional Forester in August 2013 allowing the older list to be used in this analysis.

Listing of special-status species does not directly influence the IRA analysis. However the recommendation of wilderness LUZ does provide more restriction on the types of uses that may occur and thus provides more indirect protection for these species and habitats. The standards and guidelines in the LMP provide for the protection of wildlife and plant species, regardless of LUZ.

In addition, the lists for special-status species (including Forest Service Sensitive Species) may change from year to year depending on new information on population or habitat trends. For example, in the last decade the bald eagle was de-listed under the Endangered Species Act and is now considered a Forest Service Sensitive Species.



Species accounts for each threatened and endangered species are not repeated here. Refer to the LMP Amendment documents located at [the project website](#). The species accounts can be read [in the FEIS reading room](#). Detailed species accounts for this document can also be found in the project record.

The four forests also maintain a Management Indicator Species (MIS) list (Table 14). These species are selected because their population changes are believed to indicate the effects of management activities (36 CFR 219.19(a) (1), 1982) and to serve as a focus for monitoring (36 CFR 219(a) (6), 1982). MIS wildlife species were developed under the 1982 National Forest System Land and Resource Management Planning Rule (1982 Planning Rule) (36 CFR 219). Guidance regarding MIS as set forth in the LMP directs Forest Service resource managers to: 1) at the project scale, analyze the effects of proposed projects on the habitats of each MIS affected by such projects, and 2) at the national forest (forest) scale, monitor populations and/or habitat trends of forest MIS, as identified by the LMP. Selection and justification of the MIS species can be found in the FEIS Volume II pages 72 to 81. The LMP direction is to maintain or improve habitat conditions to sustain healthy populations of MIS. Detailed MIS species accounts for arroyo toad, California spotted owl, mountain lion, mule deer, and song sparrow can be found in the project record.

**Table 11. Summary of Threatened, Endangered, Proposed, and Candidate Species within IRAs**

Common Name	Latin Name	Occurrence by Forest	Occurrence In IRA
<b>ENDANGERED SPECIES</b>			
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	CNF, SBNF	None
Laguna mountain skipper	<i>Pyrgus ruralis lagunae</i>	CNF	Barker Valley
Smith's blue butterfly	<i>Euphilotes enoptes smithi</i>	LPNF	None
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	LPNF	Sespe-Frazier
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	LPNF	None
Tidewater goby	<i>Eucyclogobius newberryi</i>	LPNF	None
Unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	ANF, SBNF	None
Southern steelhead (Southern California DPS)	<i>Oncorhynchus mykiss</i>	CNF, LPNF	Dry Lakes, Sespe-Frazier
		LPNF	None
Blunt-nosed leopard lizard	<i>Gambelia silus</i>		
Mountain yellow-legged frog	<i>Rana muscosa</i>	ANF, SBNF	Cucamonga B, Cucamonga C, Raywood Flat B
California condor	<i>Gymnogyps californianus</i>	ANF, LPNF, SBNF	Antimony, Black Mountain, Cuyama, Diablo, Dry Lakes, Fish Canyon, Fox Mountain, Garcia Mountain, Juncal, Salt Creek, Madulce Buckhorn, Quatal, Sespe-Frazier, Spoor Canyon, Machesna Mountain, Sawmill-Badlands, White Ledge
Arroyo toad	<i>Anaxyrus californicus</i>	ANF, CNF, LPNF, SBNF	Cedar Creek, Diablo, Eagle Peak, Fish Canyon, Salt Creek, Barker Valley, Caliente, Trabuco, Juncal, Sespe-Frazier, Cucamonga C, Upper San Diego River, Madulce-Buckhorn
Southwestern willow flycatcher	<i>Empidonax trailii extimus</i>	ANF, CNF, LPNF, SBNF	Sespe-Frazier, Raywood Flats
Least Bell's vireo	<i>Vireo bellii pusillus</i>	ANF, CNF, LPNF, SBNF	Diablo, Juncal, Madulce Buckhorn

Common Name	Latin Name	Occurrence by Forest	Occurrence In IRA
California least tern	<i>Sterna antillarum browni</i>	LPNF	None
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	LPNF	None
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	SBNF	None
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	CNF	None
Giant kangaroo rat	<i>Dipodomys ingens</i>	LPNF	None
Peninsular bighorn sheep	<i>Ovis canadensis nelsoni</i>	SBNF	Pyramid Peak A, Cactus Springs B
<b>THREATENED SPECIES</b>			
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	LPNF	Sespe-Frazier
Kern primrose sphinx moth	<i>Euproserpinus euterpe</i>	LPNF	None
southern steelhead (South/Central California Coast DPS)	<i>Oncorhynchus mykiss</i>	LPNF	None
Santa Ana sucker	<i>Catostomus santannae</i>	ANF,	Sespe-Frazier
California red-legged frog	<i>Rana draytonii</i>	ANF, CNF, LPNF	Diablo, Garcia Mountain, Juncal, Madulce Buckhorn
Desert Tortoise	<i>Gopherus agassizii</i>	ANF, SBNF	None
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	ANF, CNF, SBNF	Cedar Creek, Cold Water, Eagle Peak, No Name, Sill Hill, Upper San Diego River, Trabuco
Marbled murrelet	<i>Brachyramphus marmoratus</i>	LPNF	None
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	LPNF	None
Southern sea otter	<i>Enhydra lutris nereis</i>	LPNF	None
Stellar sea lion	<i>Eumetopias jubatus</i>	LPNF	None
<b>FEDERAL CANDIDATE SPECIES</b>			
Western yellow-billed cuckoo	<i>Coccyzus americanus</i>	LPNF, SBNF	None
Hermes Copper Butterfly	<i>Lycaena hermes</i>	CNF	None

**Table 12. Designated Critical Habitat**

COMMON NAME	LATIN NAME	FOREST	IRA WITH DESIGNATED CRITICAL HABITAT
<b>ENDANGERED SPECIES</b>			
Laguna mountain skipper	<i>Pyrgus ruralis lagunae</i>	CNF	Barker Valley
Conservancy fairy shrimp	<i>Branchinecta conservation</i>	LPNF	Sespe-Frazier
Southern steelhead (southern California DPS)	<i>Oncorhynchus mykiss</i>	LPNF	Dry Lakes, Sespe-Frazier, Tequepis, White Ledge
Mountain yellow-legged frog	<i>Rana muscosa</i>	SBNF	Cucamonga B, Cucamonga C
California condor	<i>Gymnogyps californianus</i>	ANF, LPNF	Sespe-Frazier, Fox Mountain, Machesna Mountain, Madulce Buckhorn, Sawmill Badlands
Arroyo toad	<i>Anaxyrus californicus</i>	ANF, CNF, LPNF	Fish Canyon, Salt Creek, Barker Valley, Caliente, Cedar Creek, Eagle Peak, No Name, Sill Hill, Trabuco, Upper San Diego River, Dry Lakes, Juncal, Madulce Buckhorn, Sespe-Frazier
Southwestern willow flycatcher	<i>Empidonax trailii extimus</i>	SBNF	Raywood Flats B
Least Bell's vireo	<i>Vireo bellii pusillus</i>	LPNF	Diablo, Juncal, Madulce Buckhorn
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	SBNF	Cucamonga B
<b>THREATENED SPECIES</b>			
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	LPNF	Sespe- Frazier
Southern steelhead (South/Central California Coast DPS)	<i>Oncorhynchus mykiss</i>	LPNF	none
Santa Ana Sucker	<i>Catostomus santannae</i>	ANF	none
California red-legged frog	<i>Rana draytonii</i>	ANF, LPNF	Red Mountain, Sespe- Frazier, Diablo, Dry Lakes, Garcia Mountain, Juncal, Machesna Mountain, Madulce-Buckhorn, Sespe-Frazier, Tequepis, White Ledge
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	CNF	Cedar Creek, Cold Water, Eagle Peak, No Name, Sill Hill, Trabuco, Upper San Diego River

**Table 13. Sensitive Wildlife Species Occurrence by Forest**

COMMON NAME	LATIN NAME	OCCURRENCE BY FOREST			
		ANF	CNF	LPNF	SBNF
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	Y	Y	P	Y
Arroyo chub	<i>Gila orcutti</i>	Y	Y	P	Y
Partially armored threespine stickleback	<i>Gasterosteus aculeatus microcephalus</i>	N	N	N	Y
Large-blotched ensatina	<i>Ensatina eschscholtzii klauberi</i>	N	Y	N	Y
Yellow-blotched ensatina	<i>Ensatina eschscholtzii croceater</i>	Y	N	Y	Y
San Gabriel Mountain slender salamander	<i>Batrachoseps gabrieli</i>	Y	N	N	Y
Tehachapi slender salamander	<i>Batrachoseps stebbinsi</i>	N	N	Y	N
Southwestern pond turtle	<i>Emys marmorata pallida</i>	Y	Y	Y	Y
California legless lizard	<i>Aniella pulchra</i>	Y	Y	Y	Y
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>	Y	Y	Y	Y
Southern rubber boa	<i>Charina umbratica</i>	Y	N	Y	Y
Coastal rosy boa	<i>Lichanura trivirgata rosafusca</i>	Y	Y	N	Y
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	Y	N	N	Y
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	N	Y	N	Y
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirubra</i>	Y	N	N	Y
San Diego mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	N	Y	N	Y
Two-striped garter snake	<i>Thamnophis hammondi</i>	Y	Y	Y	Y
Foothill yellow-legged frog	<i>Rana boylei</i>	Y	N	Y	N
Northern goshawk	<i>Accipiter gentilis</i>	Y	N	Y	Y
California spotted owl	<i>Strix occidentalis occidentalis</i>	Y	Y	Y	Y
Bald eagle	<i>Haliaeetus leucocephalus</i>	Y	Y	Y	Y
American peregrine falcon	<i>Falco peregrinus anatus</i>	Y	Y	Y	Y
Willow flycatcher (migrant)	<i>Empidonax traillii</i>	N	N	Y	Y
San Diego cactus wren	<i>Campylorhynchus bruneicapillus sandiegense</i>	N	Y	N	Y
Brown pelican	<i>Pelicanus occidentalis</i>	N	N	Y	
Swainson's hawk	<i>Buteo swainsoni</i>	Y	Y	Y	N
California leaf-nosed bat	<i>Macrotus californicus</i>	N	Y	N	Y
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Y	Y	Y	Y
Pallid bat	<i>Antrozous pallidus</i>	Y	Y	Y	Y
Western red bat	<i>Lasiurus blossevillii</i>	Y	Y	Y	Y
Los Angeles little pocket mouse	<i>Perognathus longimembris brevinasus</i>	Y	Y	N	Y
San Bernardino white-eared pocket mouse	<i>Perognathus alticolus alticolus</i>	Y	N	N	P
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus</i>	Y	N	N	Y
San Gabriel Mountains bighorn sheep	<i>Ovis canadensis nelson</i>	Y	N	N	Y
Mount Pinos lodgepole chipmunk	<i>Tamias speciosus callipeplus</i>	N	N	Y	N
Tehachapi white-eared pocket mouse	<i>Perognathus alticola inexpectus</i>	Y	N	P	N

N = Outside known distribution/range of the species Y = Occurs and/or within known distribution/range of species U = Occurrence of the species is unlikely based on habitat L = Occurrence of the species is likely; suitable habitat exists and the species is known for nearby locations present P = Occurrence of the species is possible; suitable habitat exists

**Table 14. Management Indicator Species (MIS) Forest Occurrence**

<b>Management Indicator Species (Wildlife)</b>			
<b>Species</b>	<b>Indicators Of Management</b>	<b>Measure</b>	<b>Occurrence In Forest</b>
Arroyo toad ( <i>Anaxyrus californicus</i> )	Aquatic habitat	Trend in abundance and/or habitat condition	ANF, CNF, LPNF, SBNF
California spotted owl ( <i>Strix occidentalis occidentalis</i> )	Montane conifer forest	Occupied territories and/or habitat condition	ANF, CNF, LPNF, SBNF
Mountain lion ( <i>Puma concolor</i> )	Habitat fragmentation	Trend in distribution, movement, and/or habitat conditions	ANF, CNF, LPNF, SBNF
Mule deer ( <i>Odocoileus hemionus</i> )	Healthy diverse habitats	Trend in abundance and/or habitat condition	ANF, CNF, LPNF, SBNF
Song sparrow ( <i>Melospiza melodia</i> )	Riparian habitat	Trend in abundance and/or habitat condition	ANF, CNF, LPNF, SBNF

## Wildlife Improvements

Wildlife improvements are man-made facilities that enhance wildlife habitat in the areas where they are constructed. The most common structures are water developments, often referred to as drinkers or guzzlers. Water developments usually capture rain water and funnel it into a drinking structure, or tap into a natural water source such as a spring. Several of the IRAs have guzzlers built to improve water sources for quail and other small birds. These guzzlers were constructed and are maintained by local volunteer groups (e.g. Quail Unlimited). The guzzlers are often located adjacent to existing system roads and trails.

## Research Natural Areas (RNAs)

Several IRAs have additional land use designations called “special designation overlays” such as Research Natural Areas (RNAs). RNAs are part of a nation-wide network of ecological areas set aside for both research and education. RNAs are “...land designated in perpetuity for research and education purposes, in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural, physical and biological processes to prevail without human intervention. However, under certain circumstances, deliberate manipulation may be utilized to maintain the unique feature(s) (target element[s]) that the RNA was established to protect” (FEIS Volume II-Appendix F pgs. 275-278). The RNAs in California represent a wide range of habitats, including coastal forests, desert, valley grasslands, and high-alpine ecosystems (<http://www.fs.fed.us/psw/programs/rna/>). The 2006 LMP analyzed and established RNAs and also proposed several RNAs that overlap with IRAs included in this analysis. All RNAs included in this analysis, except for American Canyon, occur on the Cleveland National Forest (Table 15). No recommendations were made for additional RNAs as a part of LUZ re-designation.

**Table 15. Research Natural Areas (RNAs) within Inventoried Roadless Areas (IRAs)**

National Forest – IRA	Research Natural Area (Acres)
Cleveland - Eagle Peak	San Diego River (2608 acres) – proposed
Cleveland - Upper San Diego River	San Diego River (2598 acres) – proposed
Cleveland - Sill Hill	King Creek (982 acres) – established
Los Padres - Machesna Mountain	American Canyon (4 acres) – established

### *American Canyon RNA (established)*

American Canyon Research Natural Area (RNA) is located on the Santa Lucia Ranger District of the Los Padres National Forest. The RNA lies within the Machesna Mountain Wilderness and Machesna Mountain IRA. This is the only RNA identified to target Coulter pine forest in the southern coastal ranges (Central California Coast Ranges ecological section). Additionally, the pine stands provide a mixture of age, density, and serotiny for study. The RNA also contains valley needle grass grassland, which was formerly extensive throughout the valleys of California but now is much reduced (see [the RNA webpage](#)).

### *King Creek RNA (established)*

The King Creek Research Natural Area (RNA) is within the Sill Hill IRA located on the Descanso Ranger District of the Cleveland National Forest (CNF) adjacent to Cuyamaca Rancho State Park. It contains a small, rare population of Cuyamaca cypress, a relic of the ancient genus *Cupressus*, which was once widespread across North America. Cuyamaca cypress exists in six

distinct stands on the National Forest and also on state park land on the slopes of Cuyamaca Peak. All of the King Creek stands burned in a fire in 1950. Access to the RNA is by trail and a power line road forms the northern boundary. Cuyamaca cypress is considered a federal 'Species of Concern' (former candidate for listing) and has also been designated a Region 5 sensitive plant species. Most of the Cuyamaca cypress in both the RNA and in Cuyamaca Rancho State Park burned in the 2003 Cedar Fire, but regeneration is expected to be adequate to repopulate the stands because trees were old enough to have substantial cone banks at the time of the fire (CNF Land Management Plan, Part II, page 75).

#### *San Diego River RNA (proposed)*

The San Diego River proposed Research Natural Area (RNA) is located in San Diego County on the Palomar Ranger District of the Cleveland National Forest. This RNA is within the Eagle Peak and Upper San Diego River IRAs. The San Diego River area was recognized as unique and important for its inland coastal sage scrub community and riparian habitat. California sagebrush (*Artemisia californica*) is the dominant shrub, which is one of the primary plant species associated with the California gnatcatcher (*Poliophtila californica*), a federally listed threatened species. Most of the RNA is included in designated critical habitat for the California gnatcatcher (USDI-United States Department of Interior- Fish and Wildlife Service [USFWS] 2007). As of June 23, 2003, the critical habitat designation has not been finalized. The riparian zone in the RNA and Helix Water District property was once considered by the USDI Fish and Wildlife Service (2001) to be designated as critical habitat for arroyo toad (*Anaxyrus californicus*), a federally listed endangered species, but the designation was vacated in fall, 2002. The entire area of the proposed RNA was burned in the 2003 Cedar Fire. Most of the target vegetation elements should recover naturally. Some of the coastal sage scrub has now burned three times since the early 1990s, making the proposed RNA a natural laboratory for the study of frequent fire effects on this vegetation type (CNF Land Management Plan, Part II, page 75).

#### **Critical Biological Zones (CB)**

Several IRAs also have a land use zone called "Critical Biological" (CB) that focuses the management of those lands for the protection of species-at-risk. The 2006 LMP identified 994 acres of CB zone lands within IRAs included in this analysis (Table 16). Critical Biological land use zones include the most important areas on the national forest to manage for the protection of species-at-risk (threatened and endangered species and their critical habitats). The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development to manage for protection of species-at-risk. Activities and modification to existing infrastructure are allowed if they are beneficial or neutral to the species for which the zone was primarily designated (SBNF Forest Plan, Part II, pgs. 2-11). Portions of the Castaic CB on the Angeles National Forest and portions of the King Creek CB on the Cleveland National Forest are proposed for re-allocation to recommended wilderness in Alternatives 2, 2a, and 3.



**Table 16. Critical Biological Zones within IRAs**

National Forest	IRA	Critical Biological Zone (CB)
Angeles	Salt Creek	Castaic (158 ac)
Cleveland	Sill Hill	King Creek (506 ac)
Los Padres	Madulce Buckhorn	Indian Creek (273 ac)
Los Padres	Sespe-Frazier (Mt Pinos)	Upper Piru (103 ac)
Los Padres	Sespe-Frazier (Ojai)	Upper Sespe River (18 ac)

*Castaic Critical Biological Zone*

The Castaic CB is within the Salt Creek IRA and the Santa Clara Canyons Place. The species of interest in this CB include the arroyo toad and California red-legged frog, both federally listed species. There is also habitat for southwestern willow flycatcher, unarmored threes-spine stickleback, California condor, least bell’s vireo, San Diego horned lizard, and the two-striped garter snake.

*King Creek Critical Biological Zone*

The King Creek CB is within the Sill Hill IRA and the Upper San Diego River Place. It overlaps with the King Creek Research Natural Area (RNA). The primary species of interest is a small, rare population of Cuyamaca cypress (*Cupressus stephensonii*), a Region 5 sensitive plant species. There are no known wildlife species of concern in this area. Potential habitat for San Diego horned lizard and rosy boa is present.

*Indian Creek Critical Biological Zone*

The Indian Creek CB is within the Madulce Buckhorn IRA and the Figueroa-Santa Ynez Place. The species of interest in this CB include: arroyo toad, California red-legged frog, least Bell’s vireo, southwestern pond turtle, and the two-striped garter snake. The area also supports extensive cottonwood/willow riparian woodlands in southern California, which is habitat for southwestern willow flycatchers (*Empidonax traillii extimus*) and least Bell’s vireos (*Vireo bellii pusillus*), which are federally-listed endangered species.

*Upper Piru Critical Biological Zone*

The Upper Piru CB is within the Sespe-Frazier IRA and the Sespe, Hungry-Valley Mutau Place. The Piru Creek watershed contains arroyo toad (*Anaxyrus californicus*), which is federally-listed as endangered. Its tributaries support California red-legged frogs, southwestern pond turtles, and southern steelhead trout (*Oncorhynchus mykiss*) which are federally listed threatened species. The Upper Piru watershed also contains California spotted owls (*Strix occidentalis occidentalis*) in the uplands. The uplands of Upper Piru Creek were proposed as a Critical Biological Zone but were not officially designated in the 2006 LMP.

*Upper Sespe River Critical Biological Zone*

The Upper Sespe River CB is within the Sespe-Frazier IRA and the Sespe Place. The Sespe River is the only remaining undammed tributary to the Santa Clara River, the longest relatively natural river remaining in southern California. It contains extensive riparian habitat. The species

of interest in this CB is the arroyo toad and steelhead trout, both federally-listed endangered and threatened, respectively.

## **Botanical Resources**

The four southern California national forests manage for the support and recovery of occurrences of and habitat for 20 endangered and 10 threatened plant species. Additionally, there is designated Critical Habitat for threatened and endangered plants on NFS lands. The four forests also manage and support occurrences and habitat for 199 plant species designated as Sensitive by the Regional Forester for the Pacific Southwest Region (Region 5). As noted above in the Wildlife section, this SEIS uses the sensitive species list from August 2012 after being granted an exception in August 2013 by the Regional Forester from using the June 30, 2013 list.

Listing of special-status species does not directly influence the IRA analysis. However the recommendation of wilderness does provide more restriction on the types of uses that may occur and thus provides more indirect protection for these species and habitats. The standards and guidelines in the LMP provide for the protection of wildlife and plant species, regardless of LUZ. In addition, the lists for special-status species (including Forest Service Sensitive Species) may change from year to year depending on new information on population or habitat trends.

The Botanical Biological Assessment (USDA FS 2013c), the Addendum to the Botany and Non-native species report (USDA FS 2013b), and the Botany and Non-native Species Report (USDA FS 2013a) included in the project record for this analysis contains detailed information about the botanical resources found in the IRAs. The following discussions summarize these reports.

### **Threatened and Endangered Plant Species and Critical Habitat**

Out of 30 federally-listed threatened and endangered (T&E) plants that occur on the four forests, four species, *Poa atropurpurea*, *Eryngium aristulatum* var. *parishii*, *Chlorogalum purpureum* var. *reductum* and *Eremalche parryi* subsp. *kernensis*, are known to occur or have designated Critical Habitat in the IRAs. Floristic surveys have not been conducted throughout the IRAs, therefore additional occurrences and/or species may be present, especially after wildfire. Detailed species accounts (with reference citations) for the four species known to occur are contained in Appendix B of the Botanical Biological Assessment (USDA FS 2013c); they are summarized below.

Table 17 displays the LUZs of occupied and Critical Habitat or occurrences under current conditions.

**Table 17. Threatened & Endangered Species Habitat Acres or Number of Occurrences and Current Land Use Zoning**

Land Use Zone	Alternative 1	
	Occupied Habitat	Critical Habitat
<i>Poa atropurpurea</i> acres		
BCMUR	2.63	145
BCNM	0	15
RW	0	0
Total	2.63	160
<i>Eryngium aristulatum</i> var. <i>parishii</i> acres		
BC	0.10	0
RW	0	0
Total	0.10	0
<i>Chlorogalum purpureum</i> var. <i>reductum</i> acres		
BC	0	67
BCNM	0	15
RW	0	0
Total	0	82
<i>Eremalche parryi</i> subsp. <i>kernensis</i> occurrences		
BC	1	0
BCNM	0	0
RW	0	0
Total	1	0

*Poa atropurpurea* (San Bernardino bluegrass)

*Poa atropurpurea* was federally-listed as endangered in 1998 (USFWS 1998; 63 Federal Register 49006-49022). Critical Habitat was designated in 2008 (USFWS 2008a: 73 Federal Register 47706 47767). A Recovery Plan has not been finalized.

*Poa atropurpurea* is restricted to the San Bernardino Mountains in San Bernardino County and the Laguna and Palomar Mountains in San Diego County. There is designated Critical Habitat on the Cleveland and San Bernardino National Forests. *Poa atropurpurea* is a monocotyledon in the grass family (*Poaceae*). It is a dioecious, rhizomatous, perennial grass that flowers between April and June and occurs in montane meadows and seeps at elevations of 4,400 to 8,000 feet.

There are 2.63 acres of *Poa atropurpurea* occupied habitat in the Barker Valley IRA on the CNF. There are 160 acres of *Poa atropurpurea* Critical Habitat in the Barker Valley IRA.

*Eryngium aristulatum* var. *parishii* (San Diego button celery)

*Eryngium aristulatum* var. *parishii* was listed as Endangered in 1993 (58 FR 41384) and is included in the Recovery Plan for Vernal Pool Plants of Southern California issued in September 1998. Critical habitat has not been designated. It was listed as endangered by the State of California in 1979 (USFWS 2010).

The plant is known to occur within 14 geographic areas in Riverside and San Diego Counties. Four sites occur on the Santa Rosa Plateau, the remainder of occupied range occurs in ten regional locations in San Diego County including MCB Camp Pendleton, Carlsbad, San Marcos, Ramona, Del Mar Mesa, Carmel Mountain, Mira Mesa, MCAS Miramar, Otay Lakes and Otay Mesa. A few occurrences are also known from northern Baja California, Mexico.

*Eryngium aristulatum* var. *parishii* is a spreading plant reaching 16 inches in height in the carrot/parsley (Apiaceae) family. It can occur as a bi-annual herb or a longer lived perennial due to its storage tap-root (Preston, Park and Constance 2012). It is known as a vernal pool obligate occurring on clay soils and relies on ephemerally wet conditions for reproduction. While it is often associated with other federally listed vernal pool flora (*Orcuttia californica*, *Pogogyne abramsii*, *Pogogyne nudiuscula*, *Navarretia fossalis*), *Eryngium aristulatum* var. *parishii* may be more able to tolerate habitat along the periphery of a vernal pool than most obligate vernal pool species (USFWS 2010). *Eryngium aristulatum* var. *parishii* is also known to occur in marshes (Preston, Park and Constance 2012). *Eryngium aristulatum* var. *parishii* flowers from April-June, and is an outcrosser that reproduces exclusively from seeds (USFWS 2010). Assumed to be insect pollinated like *Eryngium aristulatum* var. *aristulatum*, conservation of all life stages of pollinators in adjacent habitat may be needed for pollination (Thorp 2007 in USFWS 2010).

There is 1/10 acre of occupied habitat within the road buffer of Eagle Peak Road that is zoned as BC. The location of this occurrence is adjacent to but not within an IRA or undeveloped area. Roadless Rule regulations do not apply to this occurrence. While it is not currently located within an IRA, it is described here to compare the management under the different alternatives.

*Chlorogalum purpureum* var. *reductum* (Camatta Canyon amole)

This species was listed as threatened in 2000 (USFWS 2000: 65 FR 14878-14888) and Critical Habitat was designated on October 24, 2002 (USFWS 2002: 67 FR 65413; USFWS 2003: 68 FR 20083). A Recovery Plan for *Chlorogalum purpureum* var. *reductum* is not yet available.

*Chlorogalum purpureum* var. *reductum* is a monocot in the century plant family (*Agavaceae*), a narrowly-distributed endemic that occurs on the northeast side of the La Panza Range in San Luis Obispo County. It is known from one population within a small geographic area. This amole is a perennial lily that has a very restricted distribution and is estimated to occupy only 127 acres (USFWS 2008b), 41 of which occur on the LPNF (USDA Forest Service 2005). Plants occur in two discrete locations near State Highway 58. Most of the population is believed to occur on the LPNF; however, lack of surveys on non-NFS lands make it impossible to quantify. The LPNF occurrence is known to extend onto the adjacent right-of-way of State Highway 58 managed by the California Department of Transportation and onto nearby private properties.

The plant occurs in grassland, oak woodland, and oak savannah at elevations of 1,000 to 2,050 feet in the South Coast Ranges. At both known locations the plants grow in variously sized patches and are not uniformly distributed throughout the habitat, which is described as sparsely vegetated annual grasslands surrounded by blue oak (*Quercus douglasii*) woodland and gray/foothill pines (*Pinus sabiniana*).

*Chlorogalum purpureum* var. *reductum* grows on well-drained red clay soils with substantial amounts of pebbles and gravels and high (8:1) calcium to magnesium ratio. This species may be associated with cryptobiotic (i.e. cryptogamic) crusts (USFWS 2008b).

There is no known occupied habitat within any of the analyzed IRAs. However, there is an occurrence approximately 800 feet east of the Black Mountain IRA boundary.

There are 4,378 acres of Critical Habitat for *C. purpureum* var. *purpureum* with 1,087 acres (approximately 25%) occurring on NFS lands. Eighty two acres of Critical Habitat are within the Black Mountain IRA on the Los Padres National Forest.

*Eremalche parryi* subsp. *kernensis* (Kern mallow)

*Eremalche kernensis* is the name retained by USFWS for the plant now referred to as *Eremalche parryi* subsp. *kernensis* (C.B. Wolf) D.M. Bates (Baldwin, B.G. *et al.* 2012). The discussion below utilizes the latest nomenclature.

*Eremalche parryi* subsp. *kernensis* was listed as Endangered in 1990 (55 FR 29361) and is included in the Recovery Plan for Upland Species of the San Joaquin Valley; California in September 1998 (USFWS 1998). No recovery actions were recommended for USFS lands as presence was unknown at the time. Critical habitat has not been designated.

Occupied habitat includes arid lands within the southern San Joaquin Valley, Carrizo Plain, Cuyama Valley and the Transverse Ranges. *Eremalche parishii* subsp. *kernensis* is an annual herb in the mallow family (Malvaceae) with flower color ranging from white to more or less purple. It is the only taxon in the *Eremalche* genus that exhibits gynodioecy (plants with either perfect flowers or pistillate flowers). Populations have been found to be comprised of plants that exhibit perfect flowers and plants with pistillate flowers.

There is one known occurrence of *Eremalche parryi* subsp. *kernensis* within the Sawmill-Badlands IRA on the LPNF (USFWS 2013, California Consortium Herbaria 2013, California Natural Diversity Database 2013). The occurrence is within the BC land use zone. Acreages of the plant are not available.

### **Sensitive Plant Species**

There are 72 Forest Service sensitive plant species known to occur within the IRAs analyzed in this evaluation. The botany and non-native species reports (USDA FS 2013a) and the Addendum (USDA FS 2013b) contain detailed information and references to species accounts for each sensitive plant species as well as information and maps for known occurrences within the IRAs. Floristic surveys have not been conducted throughout the IRAs, therefore additional occurrences and/or species may be present, especially after wildfire.

Table 18 displays the acreage of known sensitive plant occurrences by IRA. Table 19 summarizes the acreages of known sensitive plant occurrences by species for all of the IRAs. Because focused surveys have not been conducted in all parts of every IRA, it is possible that other sensitive plant occurrences are present but undetected and unmapped in the IRAs.

There are several species that have been proposed for addition to the Regional Forester's Sensitive Species List. Since they may be considered sensitive before the Record of Decision is signed for this project, those species (where noted) are being evaluated as sensitive so that it would not be necessary to conduct another analysis later.

**Table 18. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs**

<b>Forest, Inventoried Roadless Area, Sensitive Species <sup>1</sup></b>	<b>Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup></b>
<b>Angeles</b>	
<b>Westfork IRA</b>	<i>LUZs with Occurrences:</i> BC
<i>Lepechinia fragrans</i>	0.08 acres BC
<b>Cleveland</b>	
<b>Barker Valley IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM
<i>Astragalus oocarpus</i>	0.12 acres BCNM
<i>Brodiaea orcuttii</i>	53.55 acres BCMUR
<i>Caulanthus simulans</i>	2.12 acres BC 3.87 acres BCNM
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	0.04 acres BCNM
<i>Limnanthes alba</i> var. <i>parishi</i> ( <i>Limnanthes gracilis</i> var. <i>parishi</i> )	0.04 acres BC 64.83 acres BCMUR
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.68 acres BCNM
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	5.58 acres BC 3.72 acres BCMUR 68.96 acres BCNM
<b>Caliente IRA</b>	<i>LUZs with Occurrences:</i> BCNM
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.66 acres BCNM
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRA</b>	<i>LUZs with Occurrences:</i> BC, BCNM
<i>Astragalus deanii</i>	0.35 acres BCNM
<i>Clarkia delicate</i>	0.32 acres BC
<b>Coldwater IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 acres BC 0.04 acres BCNM
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 acres BC
<i>Lepechinia cardiophylla</i>	7.11 acres BC 0.07 acres BCMUR 8.42 acres BCNM
<i>Monardella macrantha</i> ssp. <i>hallii</i>	7.22 acres BCNM
<i>Phacelia keckii</i>	48.95 acres BCNM
<b>Eagle Peak IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM
<i>Astragalus oocarpus</i>	16.95 acres BCMUR 13.09 acres BCNM
<b>Ladd IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM
<i>Calochortus weedii</i> var. <i>intermedius</i>	0.15 acres BC 1.64 acres BCMUR 0.15 acres BCNM
<i>Lepichinia cardiophylla</i>	7.24 acres BC

Forest, Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>
	15.14 acres BCNM
<i>Phacelia keckii</i>	1.06 acres BC
<b>Sill Hill IRA</b>	<i>LUZs with Occurrences:</i> BCNM, CB , DAI
<i>Brodiaea orcuttii</i>	13.40 acres BCNM 67.50 acres CB
<i>Calochortus dunnii</i>	16.08 acres CB
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	26.56 acres BCNM 167.48 acres CB 20.61 acres DAI
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 acres BCNM
<b>Trabuco IRA</b>	<i>LUZs with Occurrences:</i> BC, BCNM, DAI
<i>Dudleya viscida</i>	5.25 acres DAI
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	6.99 acres BCNM
<i>Lepechinia cardiophylla</i>	45.28 acres BC 55.87 acres BCNM
<i>Nolina cistmontana</i>	137.38 acres BCNM
<i>Phacelia keckii</i>	0.05 acres BC
<i>Satureja chandleri</i>	264.52 acres BCNM
<i>Tetracoccus dioicus</i>	6.50 acres BCNM
<b>Upper San Diego River IRA</b>	<i>LUZs with Occurrences:</i> BCNM, CB
<i>Astragalus deanii</i>	14.39 acres BCNM
<i>Clarkia delicata</i>	2.47 acres BCNM
<b>Los Padres</b>	
<b>Dry Lakes IRA</b>	<i>LUZs with Occurrences:</i> DAI
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 acres DAI
<b>Sawmill – Badlands IRA</b>	<i>LUZs with Occurrences:</i> DAI
<i>Navarretia peninsularis</i>	0.08 acres DAI
<b>Sespe – Frazier IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM
<i>Acanthoscyphus parishi</i> var. <i>abramsii</i>	0.08 acres BCMUR
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 acres BC 0.08 acres BCNM
<i>Fritillaria ojaiensis</i>	0.23 acres BCNM
<i>Monardella linoides</i> ssp. <i>oblonga</i>	0.08 acres BC
<i>Navarretia peninsularis</i>	0.08 acres BC
<b>White Ledge IRA</b>	<i>LUZs with Occurrences:</i> BCNM
<i>Streptanthus campestris</i>	0.08 acres BCNM
<b>San Bernardino</b>	
<b>Cactus Springs B IRA</b>	<i>LUZs with Occurrences:</i> BC
<i>Astragalus bicristatus</i>	0.18 acres BC
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 acres BC

<b>Forest, Inventoried Roadless Area, Sensitive Species <sup>1</sup></b>	<b>Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup></b>
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	0.24 acres BC
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.15 acres BC
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 acres BC
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 acres BC
<i>Heuchera hirsutissima</i>	0.72 acres BC
<i>Lilium parryi</i>	0.23 acres BC
<i>Saltugilia latimeri</i>	0.38 acres BC
<i>Sedum niveum</i>	0.08 acres BC
<i>Sidotheca emarginata</i>	0.99 acres BC
<b>Cactus Springs B New IRA</b>	<i>LUZs with Occurrences:</i> BC
<i>Calochortus palmeri</i> var. <i>munzii</i>	0.16 acres BC
<i>Dieteria canescens</i> var. <i>ziegleri</i>	0.38 acres BC
<i>Heuchera hirsutissima</i>	1.32 acres BC
<i>Lilium parryi</i>	0.06 acres BC
<i>Sidotheca emarginata</i>	0.54 acres BC
<b>Pyramid Peak A IRA</b>	<i>LUZs with Occurrences:</i> BC, RW
<i>Boechera johnstonii</i>	5.08 acres BC 8.37 acres RW
<i>Penstemon californicus</i>	6.18 acres BC 8.56 acres RW
<b>Raywood Flat B IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM
<i>Calochortus plummerae</i> <sup>3</sup>	0.31 acres BCNM
<i>Lilium parryi</i>	0.10 acres BCMUR
<sup>1</sup> IRAs not listed above have no USFS NRM TESP data available at this time.	
<sup>2</sup> Data source: USFS NRM TESP 8/30/12	
<sup>3</sup> Proposed for removal from the Regional Forester's Sensitive species list 2012.	



**Table 19. Acreages of Mapped Sensitive Plants in IRAs by Species and LUZ<sup>1</sup>**

Species	Acres by LUZ	Total acres
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	0.08 BCMUR	0.08
<i>Astragalus bicristatus</i>	0.18 BC	0.18
<i>Astragalus deanii</i>	0.35 BCNM	14.74
	14.39 BCNM	
<i>Astragalus oocarpus</i>	0.12 BCNM	31.16
	16.95 BCMUR	
	13.09 BCNM	
<i>Boechera johnstonii</i>	5.08 BC	13.44
	8.37 RW	
<i>Brodiaea orcuttii</i>	53.55 BCMUR	134.45
	13.40 BCNM	
	67.50 CB	
<i>Calochortus dunnii</i>	16.08 CB	16.08
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 BC	16.06
	0.16 BC	
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 BC	0.15
	0.08 BCNM	
<i>Calochortus plummerae</i> <sup>3</sup>	0.31 BCNM	0.31
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 BC	4.37
	0.04 BCNM	
	0.15 BC	
	1.64 BCMUR	
	0.15 BCNM	
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 DAI	0.08
<i>Caulanthus simulans</i>	2.12 BC	5.99
	3.87 BCNM	
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 BC	0.12
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> <sup>3</sup>	0.04 BCNM	0.04
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> <sup>2</sup>	0.24 BC	0.24
<i>Clarkia delicata</i> <sup>3</sup>	0.32 BC	2.79
	2.47 BCNM	
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.38 BC	0.53
	0.15 BC	
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 BC	0.18
<i>Dudleya viscida</i>	5.25 DAI	5.25
<i>Fritillaria ojaiensis</i>	0.23 BCNM	0.23
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 BC	0.64
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	167.48 CB	214.65
	26.56 BCNM	

Species	Acres by LUZ	Total acres
	20.61 DAI	
<i>Heuchera hirsutissima</i>	0.72 BC	2.04
	1.32 BC	
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	6.99 BCNM	6.99
<i>Lepechinia cardiophylla</i>	45.28 BC	139.13
	55.87 BCNM	
	7.11 BC	
	0.07 BCMUR	
	8.42 BCNM	
	7.24 BC	
<i>Lepechinia fragrans</i>	0.08	0.08
<i>Lilium parryi</i>	0.23 BC	0.39
	0.06 BC	
	0.10 BCMUR	
<i>Limnanthes alba</i> var. <i>parishi</i>	0.04 BC	64.87
	64.83 BCMUR	
<i>Monardella linoides</i> ssp. <i>oblonga</i>	0.08 BC	0.08
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.68 BCNM	20.56
	6.66 BCNM	
	7.22 BCNM	
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	5.58 BC	78.26
	3.72 BCMUR	
	68.96 BCNM	
<i>Navarretia peninsularis</i>	0.08 DAI	0.16
	0.08 BC	
<i>Nolina cismontana</i>	137.38 BCNM	137.38
<i>Penstemon californicus</i>	6.18 BC	14.74
	8.56 RW	
<i>Phacelia keckii</i>	48.95 BCNM	50.06
	1.06 BC	
	0.05 BC	
<i>Saltugilia latimeri</i>	0.38 BC	0.38
<i>Satureja chandleri</i>	264.52 BCNM	264.52
<i>Sedum niveum</i>	0.08 BC	0.08
<i>Sidothea emarginata</i>	0.99 BC	1.53
	0.54 BC	
<i>Streptanthus campestris</i>	0.08 BCNM	0.08
<i>Tetracoccus dioicus</i>	6.50 BCNM	6.5
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 BCNM	5.73

## **Invasive Non-native Species**

The risk of introduction, establishment, and spread of non-native plants and animals is addressed in detail in the botany and non-native species report (USDA FS 2013a) and the Addendum (USDA FS 2013b) in the project record. The Forest Service Manual (FSM 2900, effective December 5, 2011) contains direction on NFS lands policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial non-native and invasive species (including vertebrates, invertebrates, plants, and pathogens). More details about management direction for non-native species are included in Appendix A of the botany and non-native species report (USDA FS 2013a).

Invasive non-native species are organisms that are introduced into an area in which they did not evolve and in which they have few or no natural enemies to limit their reproduction and spread. All across the nation, non-native invasive plants, insects, fish, mollusks, crustaceans, pathogens, mammals, birds, reptiles, and amphibians and have infested hundreds of millions of acres of land and water. These organisms then prey upon, consume, harm and displace native species and their habitats. They are a major threat to native biodiversity, natural ecosystems and ecosystem services. They also threaten many species-at-risk on the national forest lands.

Many invasive non-native organisms are well-established on the four forests and are difficult to control or eradicate. Some species are so widespread that they may always persist at some level. The potential for introduction of new invasive species and the spread of those that are currently present is a continuous threat. The movement of humans, motorized and mechanized vehicles, equipment, boats, livestock, wildlife, wind and water can spread seed, reproductive plant parts and also aquatic organisms. Many species are then spread through aquatic systems. Products used on the national forests can provide sources of infestation.

The presence of urban communities within and adjacent to the national forests and lands under special-use permit also contribute to the introduction and spread of invasive species. Invasive non-native plants occur in higher densities along roadways, in areas disturbed by off-route vehicle use, livestock and fuel treatments, in campgrounds, along recreation trails and at trailheads, in utility corridors, and in aquatic habitats modified by dams and diversions.

The spread of invasive species is more probable in ecosystems with high natural disturbance or where native ecosystems have already been affected by these species. Once habitats are invaded, eradication efforts are rarely successful and the effects are irreversible (USDA FS 2000). Restoration of ecosystem conditions to a more natural state and recovery of species-at-risk are often primary reasons for treating invasive non-native species infestations. Habitat capability for native species is improved as non-native species decrease in abundance and competition or predation is reduced. Managing for sustainable riparian and terrestrial habitats is an important component of invasive species management. Thus, it is important to not only control invasive species where they occur, but also to manage habitat so it remains resilient to invasive species introduction and spread.

All of the four forests currently remove or plan to remove invasive species within some of the IRAs. Managing these lands to remain resilient is essential as invasive species introductions continue.

Specific non-native species information for each IRA can also be found in the Appendix 2 IRA Analysis. The IRA analysis describes current conditions (Alternative 1) and was updated in September 2013 in response to public comments to the Draft SEIS. .

### **Occurrences of Non-Native Plant Species in the Planning Area**

Although there are at least 99 non-native plant species that occur or have the potential to occur on one or more of the four forests, not all of these occur within the 37 IRAs evaluated in the SEIS.

Table 20 displays non-native plants known to occur in one or more of the 37 IRAs. Focused surveys for non-native species have not been completed on every acre of the IRAs; it is likely that additional non-native plants occur.

Some of the most difficult-to-eradicate plants that also have high levels of negative effects include giant reed grass, tamarisk, Spanish broom, and yellow star thistle. One or more of the national forests have ongoing efforts to control or eradicate these species.

Giant reed grass (*Arundo donax*) displaces native species as it alters the hydrology by invading streams and riparian areas. Control of this weed before it increases in population size is important as control becomes more difficult once the plant has established. *Arundo* eradication is largely achieved by cutting with chainsaws and painting the stumps with an herbicide that can be safely used around water.

Tamarisk (*Tamarix ramosissima*) displaces native plants in riparian areas, alters habitat and food webs for animals, depletes water resources, can cause soil salinity, and increases fire potential. Tamarisk eradication is largely achieved by cutting with chainsaws and painting or spraying the stumps with a type of herbicide that can be safely used around water.

Spanish broom (*Spartium junceum*) rapidly colonizes disturbed habitats and establishes thick shrub communities that displace coastal sage scrub and chaparral communities. Shrubs can be removed manually with weed wrenches one plant at a time or cut and treated with herbicide to facilitate a more rapid removal.

Yellow star thistle (*Centaurea solstitialis*) forms thick impenetrable mats that displace native vegetation. They affect the health of native wildlife and are carried in animal's hair and fur and in people's clothing. They are also wind dispersed. Mowing, habitat restoration and spraying with herbicides are all methods to control this annual species.

**Table 20. Invasive Non-Native Plants Known to Occur In Inventoried Roadless Areas**

Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
<b>Angeles National Forest</b>			
<b>Fish Canyon IRA</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>		
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			
<b>Red Mountain</b>			
Spanish broom	<i>Spartium junceum</i>		0.41
Yellow star-thistle	<i>Centaurea solstitialis</i>		
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			
<b>Sespe-Frazier (ANF Portion)</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>		
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
Tree of heaven	<i>Ailanthus altissima</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Peppergrass	<i>Lepidium latifolium</i>		
Annual grasses			
<b>Salt Creek</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>	X	0.11
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			

<b>Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup></b>	<b>Scientific Name</b>	<b>Treatments planned or occurring for the species <sup>3</sup></b>	<b>Acres <sup>4</sup></b>
Tree of heaven	<i>Ailanthus altissima</i>		
Peppergrass	<i>Lepidium latifolium</i>		
<b>Tule</b>			
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Annual grasses			
Peppergrass	<i>Lepidium latifolium</i>		
Tree tobacco	<i>Nicotiana glauca</i>		
<b>West Fork</b>			
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.26
Spanish broom	<i>Spartium junceum</i>		2.35
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Tree tobacco	<i>Nicotiana glauca</i>		
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Westfork</b>			
Bull thistle	<i>Cirsium vulgare</i>		
Spanish broom	<i>Spartium junceum</i>		2.81
Tree tobacco	<i>Nicotiana glauca</i>		0.06
Washington fan palm	<i>Washingtonia robusta</i>		
Sweet clover	<i>Melilotus alba</i> or <i>M. officinalis</i>		
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Cleveland National Forest</b>			
<b>Cedar Creek</b>			
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		4.61
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego New</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		0.28
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Italian plumeless thistle	<i>Carduus pycnocephalus</i>		0.78

Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
<b>Ladd</b>			
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>	X	
<b>Upper San Diego</b>			
Common St. John's wort	<i>Hypericum perforatum</i>		0.02
<b>Los Padres</b>			
<b>Cuyama</b>			
Yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
Spotted knapweed <sup>2</sup>	<i>Centaurea maculosa</i>		
Tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
Tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Diablo</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>	X	0.45
Tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
<b>Dry Lakes</b>			
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.21
Pineywoods dropseed	<i>Sporobolus junceus</i>		2.61
Yellow star-thistle	<i>Centaurea solstitialis</i>		0.31
Spanish broom <sup>2</sup>	<i>Spartium junceum</i>		
Fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
Tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Fox Mountain</b>			
Yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Russian knapweed <sup>2</sup>	<i>Acroptilon repens</i>		
<b>Juncal</b>			
Yellow star-thistle	<i>Centaurea solstitialis</i>		13.82
Giant reed	<i>Arundo donax</i>	X	

Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>		
<b>Machesna Mountain</b>			
Bromus species <sup>2</sup>	<i>Bromus</i> spp.		
Yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
<b>Madulce Buckhorn</b>			
Tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>	X	
<b>Sespe- Frazier (unknown districts)</b>			
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		15.45
Pineywoods dropseed	<i>Sporobolus junceus</i>		0.01
Smallflower tamarisk	<i>Tamarix parviflora</i>		2.09
Fennel	<i>Foeniculum vulgare</i>		1.06
Yellow star-thistle	<i>Centaurea solstitialis</i>		40.30
<b>Sespe-Frazier- Mt Pinos Ranger District</b>			
Tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>	X (in planning stages)	
<b>Sespe-Frazier- Ojai Ranger District</b>			
Yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
Tamarisk, salt cedar <sup>2</sup>	<i>Tamarix ramosissima</i>		
Italian thistle <sup>2</sup>	<i>Carduus pycnocephalus</i>		
Spotted knapweed <sup>2</sup>	<i>Centaurea maculosa</i>		
Tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>Tequepis</b>			
Yellow star-thistle <sup>2</sup>	<i>Centaurea solstitialis</i>		
Tocalote, Maltese star-thistle <sup>2</sup>	<i>Centaurea melitensis</i>		
Fennel <sup>2</sup>	<i>Foeniculum vulgare</i>		
Tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>White Ledge</b>			



Invasive Plant Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Scientific Name	Treatments planned or occurring for the species <sup>3</sup>	Acres <sup>4</sup>
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		3.54
Fennel	<i>Foeniculum vulgare</i>		0.16
Yellow star-thistle	<i>Centaurea solstitialis</i>		0.66
Cape-ivy <sup>2</sup>	<i>Delairea odorata</i>		
Harding grass <sup>2</sup>	<i>Phalaris aquatica</i>		
Tree tobacco <sup>2</sup>	<i>Nicotiana glauca</i>		
<b>San Bernardino National Forest</b>			
<b>Cactus Springs B</b>			
Red brome	<i>Bromus rubens</i>		0.68
<b>Cucamonga C</b>			
Tocalote, Maltese star-thistle	<i>Centaurea melitensis</i>		0.23
<b>Pyramid Peak A</b>			
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>	X	65.78
<b>Pyramid Peak A new</b>			
Tamarisk, salt cedar	<i>Tamarix ramosissima</i>	X	4.69
<sup>1</sup> Data source: USFS NRM NRIS unless otherwise noted. The presence of non-native grasses was not included in this table unless there were acres identified in the USFS NRM NRIS data. Almost all IRA analyses noted presence of non-native grasses. <sup>2</sup> Data source: 2013 IRA Analysis. Invasive plant species identified as “within or adjacent to the IRA” in the IRA Analysis were not included in this table unless presence was also included in the USFS NRM NRIS data or confirmed by the forest or district biologist or botanist. Other weeds may occur <sup>3</sup> Treatment data source: IRA Analysis and 2013 updated information from Forest Service botanists. Removal of non-native plants may be needed or proposed at any time even if not shown in planned or existing treatment column. <sup>4</sup> Species with no acres recorded are present but acreage too small for mapping unit.			

## Occurrences of Non-Native Animal Species in the Planning Area

Table 464 in the LMP FEIS displays the non-native animal species, and the habitats they affect, that occur or have potential to occur on NFS lands. There are a number of non-native animals that occur or have the potential to occur on one or more of the four forests, but not all of these occur within the 37 IRAs evaluated in this SEIS.

Table 21 displays non-native animals known to occur in one or more of the 37 IRAs. Focused surveys for non-native animal species have not been completed on every acre of the IRAs; it is likely undetected species. Specific non-native animal species information can also be found in the 37 IRA Analysis (Appendix 2). These evaluations describe the current condition (Alternative 1) were updated in September 2013 in response to public comment to the Draft SEIS. Some of the most difficult-to-eradicate animals that also have high levels of negative effects include bullfrogs, non-native fish, and feral pigs. One or more of the national forests have ongoing efforts to control or eradicate these species, often in collaboration with the California Department of Fish and Wildlife.

Feral Pig: Feral pigs (*Sus scrofa*) disrupt and damage native habitats and ecological processes as result of rooting and digging activities. They can disturb large areas of native vegetation in a short period of time. They also eat land tortoises, birds, endemic reptiles and macro-invertebrates. They also transmit diseases such as foot and mouth disease and Leptospirosis. Feral pigs are controlled by hunting and shooting and are sometimes taken by hunters for food.

American Bullfrog: American bullfrog (*Lithobates catesbeianus* formerly *Rana catesbeiana*) are predators of many native amphibians and fish (including some endangered species). They have been linked to spread of the chytrid fungus that is responsible for declining amphibian populations. Bullfrog eradication is achieved largely by shooting, spearing, bow and arrow, and nets and traps.

Non-Native Fish – Various Species: There are a number of non-native fish, including goldfish, carp, and mosquito fish that have become naturalized after being released in lakes, ponds, and springs on NFS lands. These species threaten native ecosystems by outcompeting or preying upon native amphibians, fish, and macro-invertebrates. They can also spread aquarium diseases to native fish.

**Table 21. Non-Native Animal Occurrences by IRA**

Invasive Animal Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Invasive Species Scientific Name	Forests have planned or existing treatments for non-native animal species <sup>2</sup>
<b>Cleveland National Forest</b>		
<b>Cedar Creek, Eagle Peak, Upper San Diego River</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>Eagle Peak</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>No Name</b>		
Feral pig	<i>Sus scrofa</i>	X
<b>Upper San Diego River</b>		
Feral pig	<i>Sus scrofa</i>	X
Bull frog	<i>Rana catesbiana</i>	X
Non-native fish		X
<b>Caliente, Barker Valley</b>		
Feral pig	<i>Sus scrofa</i>	X

Invasive Animal Species Occurrences By Forest and Inventoried Roadless Area <sup>1</sup>	Invasive Species Scientific Name	Forests have planned or existing treatments for non-native animal species <sup>2</sup>
<b>Los Padres</b>		
<b>Juncal</b>		
Bullfrog	<i>Rana catesbiana</i>	
Sunfish	<i>Lepomis sp.</i>	
Bullhead fish	<i>Ameiurus (Ictalurus) melas</i>	
<b>Madulce Buckhorn</b>		
Bullfrog	<i>Rana catesbiana</i>	
<b>Sespe- Frazier Mount Pinos District</b>		
Bullfrog	<i>Rana catesbiana</i>	
<b>Sespe-Frazier-Ojai Ranger District</b>		
Bullfrog	<i>Rana catesbiana</i>	
<sup>1</sup> Data source: 2013 IRA Analysis <sup>2</sup> Data source: IRA Analysis and 2012 updated information from Forest biologists/botanists. Removal of non-native animals may be needed or proposed at any time even if not shown in planned or existing treatment column.		

## **Watershed**

Watersheds in the four national forests are the headwaters and primary source areas for most of the major river systems in southern California as well as the primary recharge area for most fractured-rock aquifers within the mountains. Water flowing from NFS lands also contributes to ground water recharge in many of the alluvial systems downstream of the forest boundaries.

A healthy watershed operates in dynamic equilibrium. This balance can be affected by national forest management activities, off-forest uses, and natural events such as earthquakes and wildland fires. Heavy precipitation and flood events may cause erosion and sedimentation and naturally occurring chemical compounds found in the rocks can affect surface water quality. Management activities, public uses and natural events that disturb the soil surface, as well as those that impeded or remove stream flow, generally have the greatest potential to affect aquatic and riparian-dependent resources.

Watershed are divided and sub-divided into successively smaller watersheds or hydrologic units and classified by hydrologic unit code (HUC) from the smallest cataloging units to the largest regions. The sixth level of classification ranges from 10,000 to 40,000 acres. The four forests include the headwaters for 323 sixth-field HUCs (Table 22).

Watershed condition is the primary indicator used to evaluate the effects of forest planning decisions. During the plan revision process, watersheds were evaluated at the larger HUC 5 scale (50,000 to 200,000 acres). In 2001, priority watersheds were identified using an integrated team approach and watershed health was ranked using a system of indicators. These indicators included soil erosion, mass wasting, floodplain connectivity, water quality, water quantity, stream vegetation, channel stability, and aquatic integrity. Each indicator was given a rating of 1 (low threat), 2 (moderate threat), or 3 (high threat). This ranking process, using 5<sup>th</sup>-field HUCs, resulted in 43 functioning (Class 1 – low threat), 34 functioning at-risk (Class 2 – moderate threat), and 12 impaired (Class 3 – high threat) watersheds (FEIS Table 123, page 199).

The watershed condition assessment changed at the national level in 2011. Watersheds within the four forests were reassessed using an IDT approach and the national set of indicators. The scale of the analysis changed to smaller HUC 6 watersheds between 10,000 and 40,000 acres, resulting in an increase in the number of watersheds reported (99 HUC-5s to 323 HUC-6s). Instead of the eight indicators assessed in 2001, 12 were used in 2011. Aquatic physical characteristics include water quality, water quantity, and aquatic habitat and account for 30 percent of the score. Aquatic biological characteristics include aquatic biota and riparian vegetation and account for 30 percent of the score. Terrestrial physical characteristics include roads and trails, and soils and account for 30 percent of the score. Terrestrial biological characteristics include fire regime, forest cover, non-forest cover, terrestrial invasive species, and forest health and account for 10 percent of the score. Each indicator was given a rating of 1 (functioning), 2 (functioning at risk), or 3 (impaired). Table 22 summarizes the 2011 ratings for the sixth-field HUCs on the four forests.

**Table 22. Watershed Acreage, Land Ownership and Summary HUC Watershed Condition Ratings (as determined in FY11) by Forest**

National Forest	Watersheds	Watershed Acreage	Non-NFS land Acreage	Percent of Watershed in Non-NFS land	Watershed Condition Rating		
					Functioning	Functioning at-Risk	Impaired
ANF	60	1,306,785	662,277	51%	17	33	10
CNF	47	1,145,474	729,727	64%	31	16	0
LPNF	148	3,139,788	1,352,306	43%	97	51	0
SBNF	68	1,591,203	933,727	59%	14	40	14
Total	323	7,183,250	3,678,037	51%	159	140	24

Watersheds that are functioning properly have five important characteristics (Williams et al. 1997):

- They provide for high biotic integrity, which includes habitats that support adaptive animal and plant communities that reflect natural processes.
- They are resilient and recover rapidly from natural and human disturbances.
- They exhibit a high degree of connectivity longitudinally along the stream, laterally across the floodplain and valley bottom, and vertically between surface and subsurface flows.
- They provide important ecosystem services, such as high quality water, the recharge of streams and aquifers, the maintenance of riparian communities, and the moderation of climate variability and change.
- They maintain long-term soil productivity.

The Forest Service Manual (FSM) uses three classes to describe watershed condition (FSM 2521.1).

- Class 1 watersheds exhibit high geomorphic, hydrologic, and biotic integrity relative to their natural potential condition.
- Class 2 watersheds exhibit moderate geomorphic, hydrologic, and biotic integrity relative to their natural potential condition.
- Class 3 watersheds exhibit low geomorphic, hydrologic, and biotic integrity relative to their natural potential condition.

Integrity is evaluated in the context of the natural disturbance regime, geoclimatic setting, and other important factors within the context of a watershed. The definition encompasses both aquatic and terrestrial components because water quality and aquatic habitat are inseparably related to the integrity and, therefore, the functionality of upland and riparian areas within a watershed. A Class 1 watershed that is functioning properly has minimal undesirable human impact on its natural, physical, or biological processes, and it is resilient and able to recover to the desired condition when disturbed by large natural disturbances or land management activities (Yount and Neimi 1990). By contrast, a Class 3 watershed has impaired function because some physical, hydrological, or biological threshold has been exceeded. Substantial changes to the factors that caused the degraded state are commonly needed to return the watershed to a properly functioning condition.

The Watershed Condition Class (WCC) system consists of 12 watershed condition indicators:

1. Water Quality – 303d listed waters, other water quality problems
2. Water Quantity – flow characteristics
3. Aquatic Habitat – fragmentation, large woody debris, channel shape and function
4. Aquatic Biota – life form presence, native species, exotic and/or invasive species
5. Riparian/Wetland Vegetation – vegetative condition
6. Roads and Trails – density, maintenance, proximity to water, mass wasting
7. Soils – productivity, erosion, contamination
8. Fire Regime or Wildfire – fire condition class or wildfire effects
9. Forest Cover – loss
10. Rangeland Vegetation – condition
11. Terrestrial Invasive Species – extent and rate of spread
12. Forest Health – insects and disease, ozone

As part of the assessment, each indicator is rated as either GOOD (the watershed is functioning properly [between 75-100% of undisturbed, depending on indicator] with respect to that attribute), FAIR (the watershed is functioning at risk [between 25-90% of undisturbed, depending on indicator] with respect to that attribute), or POOR (the watershed is impaired or functioning at unacceptable risk [from <25% to <90% of natural, depending on indicator] with respect to that attribute). The large range encompassing a FAIR rating generally indicates that moving to a GOOD condition will take a substantial change in land management and restoration activities.

Using the new national indicators and methodology, the percentage of watersheds on all forests in Condition Class 3 (Impaired) declined from 13 percent to 7.4 percent, the percentage in Condition Class 2 (Functioning At-Risk) increased from 38 to 43.3 percent, and the percentage in Condition Class 1 (Functioning) remained nearly the same, from 48 to 49.3 percent. The watershed condition class for the IRAs is summarized in Tables 23 through 28.

**Table 23. ANF - WCC rating by IRA and HUC 6 watershed**

IRA Name	HUC 6	Current WCC
Red Mountain	Elizabeth Lake Canyon (180701020304)	2
	San Francisquito Canyon (180701020402)	2
	Lower Castaic Creek (180701020306)	3
Salt Creek	Upper Castaic Creek (180701020303)	2
Tule	Elizabeth Lake Canyon (180701020304)	2

IRA Name	HUC 6	Current WCC
Sespe – Frazier	Lake Piru-Piru Creek (180701020603)	2
	Fish Creek-Piru Creek (180701020602)	2
West Fork/Westfork	Lower West Fork San Gabriel River (180701060105)	3
	Upper West Fork San Gabriel River (180701060102)	2
Fish Canyon	Upper Castaic Creek (180701020303)	2
	Fish Canyon (180701020302)	2
	Elizabeth Lake Canyon (180701020304)	2

**Table 24. CNF – WCC 1 Rating by IRA and HUC 6 watershed**

IRA	HUC 6 Watersheds in WCC 1
Caliente	Agua Caliente Creek, Canada Aguanga-San Luis Rey River
Coldwater	Bedford Wash-Temescal Wash, Dawson Canyon-Temescal Wash
Trabuco	Middle San Juan Creek
Cedar Creek	Cedar Creek
Eagle Peak	Cedar Creek, Ritchie Creek-San Diego River, Boulder Creek
No Name	Conejos Creek
Sill Hill	Boulder Creek, Conejos Creek
Upper San Diego River	Ritchie Creek-San Diego River

**Table 25. CNF – non WCC 1 rating by IRA and HUC 6 watershed**

IRA Name	HUC 6	Current WCC
Barker Valley	West Fork San Luis Rey River (180703030103)	2
	Matagual Creek-San Luis Rey River (180703030105)	2
Ladd	Upper Santiago Creek (180702030901)	2
Trabuco	Arroyo Trabuco (180703010103)	2
	Upper San Juan Creek (180703010101)	2
Eagle Peak	El Capitan Reservoir-San Diego River (180703040505)	2
No Name	El Capitan Reservoir-San Diego River (180703040505)	2



**Table 26. LPNF - WCC 1 rating by IRA and HUC 6 watershed**

IRA	HUC 6 Watershed in WCC 1
Antimony	Santiago Creek, San Emigdio Creek, Los Lobos Creek, Pleito Creek, Tecuya Creek
Black Mountain	Middle Branch Huerhuero Creek, East Branch Huerhuero Creek, Toro Creek-Salinas River
Cuyama	Burges Canyon-Cuyama River, Rancho Nuevo Creek
Dry Lakes	Abadi Creek-Sespe Creek, Matilija Creek
Fox Mountain	Schoolhouse Canyon-Cuyama River, Wells Creek, Bitter Creek-Cuyama River, Branch Canyon Wash, Salisbury Canyon Wash, Castro Canyon, Tennison Canyon-Cuyama River
Garcia Mountain	Upper Huansa River, Arroyo Seco, Big Spring-Salinas River
Machesna Mountain	Big Spring-Salinas River, Rogers Creek-San Juan Creek, Placer Creek-San Juan Creek
Sawmill-Badlands	Burges Canyon-Cuyama River, Apache Canyon, Oak Creek-Cuyama River, Reyes Creek-Cuyama River, Dry Canyon, Wagon Road Canyon
Sespe-Frazier	Reyes Creek-Cuyama River, Los Alamos Creek, Abadi Creek-Sespe Creek, Boulder Creek-Sespe Creek, Santa Paula Creek, Alamo Creek, Seymour Creek
Spoor Canyon	Mustang Canyon-Cuyama River
Tequepis	Quiota Creek-Santa Ynez River, Kelly Creek-Santa Ynez River
White Ledge	Carpenteria Creek-Frontal Santa Barbara Channel, Coyote Creek, Matilija Creek

**Table 27. LPNF - WCC non 1 rating by IRA and HUC 6 watersheds**

IRA Name	HUC 6	Current WCC
Black Mountain	Pozo Creek (180600050101)	1
	Shell Creek (180600040302)	1
Cuyama	Santa Barbara Canyon (180600070202)	2
	Deer Park Canyon – Cuyama River (180600070110)	2
Diablo	Agua Caliente Canyon (180600100201)	2
Dry Lakes	Tule Creek – Sespe Creek (180701020702)	2
	North Fork Matilija Creek (180701010102)	1
Fox Mountain	Santa Barbara Canyon (180600070202)	2

IRA Name	HUC 6	Current WCC
	Cottonwood Canyon-Cuyama River (180600070305)	2
Juncal	Juncal Canyon-Santa Ynez River (180600100202)	2
Machesna Mountain	Pozo Creek (180600050101)	1
	Navajo Creek (180600040105)	2
	Upper Alamo Creek (180600070401)	2
Madulce-Buckhorn	Indian Creek (180600100102)	2
	Gibraltar Reservoir – Santa Ynez River (180600100401)	2
Quatal	Quatal Canyon (180600070108)	1
Sawmill – Badlands	Quatal Canyon (180600070108)	1
	Lockwood Creek (180701020504)	2
Sespe – Frazier	Snowy Creek-Piru Creek (180701020505)	2
	Cedar Creek-Piru Creek (180701020502)	2
	Lockwood Creek (180701020504)	2
	Lake Piru-Piru Creek (180701020603)	2
	Tule Creek – Sespe Creek (180701020702)	2
	Tar Creek (180701020704)	2
Spoor Canyon	Clear Creek-Cuyama River (180600070602)	2
	Powell Canyon (180600070304)	2
White Ledge	Juncal Canyon-Santa Ynez River (180600100202)	2

**Table 28. SBNF - WCC by IRA and HUC 6 watershed**

IRA Name	HUC 6	Current WCC
Cactus Springs B	Headwaters Palm Canyon Wash (181002010201)	2
Cucamonga B	North Fork Lytle Creek (180702030302)	2
	Cajon Wash-Lytle Creek (180702030305)	3
Cucamonga C	Upper Cucamonga Creek (180702030704)	2
Pyramid Peak A	Upper Palm Canyon Wash (181002010202)	2
Pyramid Peak A	Headwaters Palm Canyon Wash (181002010201)	2

IRA Name	HUC 6	Current WCC
Raywood Flat B	Mill Creek (180702030501)	2
Raywood Flat B	South Fork Whitewater River (181002010301)	2
Raywood Flat B	Yucapia Creek (180702030402)	1
Raywood Flat B	Little Gorgonio Creek (180702030401)	
Raywood Flat B	Headwaters San Gorgonio River (181002010102)	2

## Air

The IRAs within the planning area are located within six air basins under the jurisdiction of seven Air Pollution Control Districts (APCDs) (Table 29). All lands within the planning area are designated as Class II areas under the federal Clean Air Act (CAA). As described in the FEIS (page 216), the air quality on the national forests is impacted by air pollution from adjacent urban areas. Air quality is managed by the various APCDs based on state and national air quality standards.

**Table 29. Air Basins and associated APCDs within the Planning Area**

Air Basin	Planning Area (Ac.)	APCD	Planning Area (Ac.)
Mojave Desert	6,705	Antelope Valley	6,618
		Mojave Desert	87
Salton Sea	17,640	South Coast	17,640
San Diego	47,386	San Diego	47,386
San Joaquin Valley	44,749	San Joaquin Valley Unified	44,749
South Central Coast	374,223	San Luis Obispo	36,941
		Santa Barbara	143,145
		Ventura	194,137
South Coast	138,081	South Coast	138,081

Since the issuance of the 2006 LMP, the state or federal standards displayed in FEIS in Table 558 have changed for ozone, fine particular matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide. Current state and national standards are available through the California Air Resources Board at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Air quality within the planning area has improved for some air quality components since the LMP was issued in 2006. Ozone levels are improving in the South Coast Air Basin, with declines in both the maximum concentration and basin days exceeding the national standard (SCAQMD, 2011). All classified areas are now in attainment for state standards associated with carbon monoxide. The latest state and national designations are available through the California Air Resources Board at: <http://www.arb.ca.gov/desig/adm/adm.htm>.

As described in the FEIS (page 221) common sources of air pollution within the national forests include emissions from wildland fires, unpaved roads, and vehicle emissions. Smoke contributes to PM10/PM2.5 (particulate matter) and to a lesser degree nitrogen dioxide, carbon monoxide and ozone levels. Driving on unpaved roads adds to the fine particulate matter (fugitive dust) in the air. Fugitive dust and smoke can become part of the regional air mass, adding to regional

haze. Internal combustion engines both on and off the national forests are a major source of nitrogen oxides and reactive organic gases, which are precursors to ozone.

## Special Interest Areas

Special Interest Areas (SIAs) protect and, where appropriate, foster public use and enjoyment of areas that feature scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. There are nine SIAs within the planning area as summarized in Table 30. They were designated as part of the LMP revision. SIAs are managed so that activities and discretionary uses are either neutral or beneficial for the resources values for which the area is established.

**Table 30. SIAs within the Planning Area**

Forest/SIA	Purpose	SIA Total acres	SIA acres in Planning Area	Percent of SIA in Planning Area
<b>Angeles</b>				
Liebre Mountain	Botanical – arborescent species of oaks	9,810	4,291	44%
<b>Cleveland</b>				
Chiquito Basin	Botanical – deergrass meadow and coast live oak riparian forest	738	738	100%
West Fork San Luis Rey	Wild Trout – naturally sustained population of rainbow trout	218	218	100%
<b>Los Padres</b>				
Dry Lakes	Outstanding botanical values – dry lakes and disjunct relic plant species	405	405	100%
Foster Bear Ponds	Ecological research, education, and interpretation of vernal pool environment	196	71	36%
Mono Basin	Ecological research, education, and interpretation and recreation associated with diverse upland and riparian habitats	8,269	611	7%
Mt. Pinos Summit	Botanical – limber pine	452	393	87%
Quatal Canyon	Unique geological attributes – distinctive geomorphic character	469	469	100%
Sierra Madre	Cultural and archeoastronomy	5,786	3,608	62%

## Social and Economic Environment

### Heritage Resources

Heritage (defined as cultural, historical, archaeological, ethnographic, and tribal resources) represents past human activities or uses and, by their nature, are considered irreplaceable and nonrenewable resources if not managed for preservation over the long-term. Because these resources represent important cultural values, they are of special concern to the public. Interest

in our heritage and concern over the destruction of archaeological sites has prompted the passage of national, state and local levels of legislation that are designed to promote and protect these examples of our nation's historical and traditional legacy.

Heritage within the four forests represents a diversity of cultures and their uses of landscapes. This includes native people, colonial California, late 19th and 20th century state and American history, Civilian Conservation Corps, World War II and post-WW II military features, the Cold War, and Forest Service history.

The concentration of cultural sites on the four forests is among the highest of all the national forests in the state. The Heritage and Tribal Data for the four forests shown in Table 31 indicates the number of heritage sites by type and status. The total extent of the cultural resource database for the four forests has not been determined; however, on average, approximately 10.2 percent of the national forests' acreage has been inventoried for cultural resources. Most of these surveys have been project-specific rather than large-scale or systematic surveys. Over 360,000 acres of land have been inventoried for cultural resources and more than 7,200 cultural resource sites have been recorded on the four southern California national forests.

**Table 31. Heritage and Tribal Data for Southern California National Forests**

	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	Total
Acres	655,400	434,000	1,761,000	672,000	3,522,400
Acres Surveyed	54,200	32,083	155,200	118,600	360,083
Percent	8.3%	7.3%	8.8 %	17.7%	10.2%
Sites	1,380	1,470	2,907	1,519	7,276
Prehistoric	620	1,279	1,970	779	4,648
Historic	721	191	536	475	1,923
Multi-component	38	0	108	44	190
Unidentified	1	0	293	221	515
NRHP*	13	2	54	5	74
NRHP Eligible	158	45	114	122	439
Not Eligible	167	131	92	45	435
No Determination	1,059	1,294	2,647	1,347	6,347
State Historic Landmarks	4	0	0	8	12
Federally Recognized Tribes	0	23	2	12	33**

\*NRHP= National Register Historic Places

\*\*The CNF and SBNF have three tribes that overlap within their sphere of influence.

Table 32 lists nationally and state-designated historic places on the national forests. The National Register is the legal criteria by which federal agencies and others define the significance of cultural resources. The Old Ridge Route is adjacent to the Salt Creek IRA. The Eastern Sierra Madre Ridge Archeological District is within and adjacent to the Fox Mountain IRA

**Table 32. National Register of Historic Places by Forest**

National Register Of Historic Places	Forest	Type	Number
Rock Art of the Transverse Range	ANF	Prehistoric	5
Mount Lowe Railway	ANF	Historic	1
Old Ridge Route	ANF	Historic	7
Bear Valley Prehistoric Site	CNF	Prehistoric	1
Greystone Villa—Cabin 18	CNF	Historic	1
Kirk Creek Campground	LPNF	Prehistoric	2
Eastern Sierra Madre Ridge Archeological District	LPNF	Prehistoric	25
Crowder Canyon Archeological District	SBNF	Prehistoric	4
Henry Washington, Survey Marker	SBNF	Historic	1

### **Tribal and Native American Interests**

American Indians and Alaska Natives are recognized as people with distinct cultures and traditional values. They have a special and unique legal and political relationship with the government of the United States as defined by history, treaties, statutes, court decisions and the U.S. Constitution. Tribal governments have considerable powers that are frequently separate and equal to those of state and local governments. The policy of the U.S. Government is to support Native American cultural and political integrity, emphasizing self-determination and government-to-government relationships. There are many rights and privileges associated with treaties and other agreements, such as grazing, hunting, subsistence, and access to and gathering of national forest resources. In addition, land and resources hold a special and unique meaning in the spiritual and everyday lifeways of many American Indians.

The four forests remain committed to cultivating good relationships with American Indian tribes and Native American groups. National Forest System lands and resources represent significant cultural and economic values to American Indians. Forest Supervisors have the responsibility for maintaining a government-to-government relationship with federally recognized Indian tribes. They are to ensure that the national forests' programs and activities honor Indian treaty rights and fulfill trust responsibilities, as those responsibilities apply to National Forest System lands. Treaties, statutes and executive orders often reserve off-reservation rights and address traditional interests relative to the use of federal lands. Forest Supervisors also administer programs and activities to address and be sensitive to traditional native religious beliefs and practices and provide research, transfer of technology and technical assistance to Indian governments. The four forests also consult with non-federally recognized tribes, organizations and individuals.

Currently, several agreements are in place between federally and non-federally recognized tribes and the four forests. The Los Padres National Forest is currently renegotiating expired memorandum of understandings with the Santa Ynez Band of Indians and the Salinan Nation that declared that all parties wish to continue to enhance their mutually beneficial relationship that includes Native American cultural and ancestral concerns as part of the management of the Los Padres National Forest. An agreement was executed between the San Manual Band of Mission Indians and the San Bernardino and Angeles National Forests (2001) that formally recognizes their government-to-government relationship. This memorandum of understanding outlines the goal of increased cooperation between the national forests and the Indian tribe in order to develop community opportunities and partnerships in the areas of mutual interest; it also

documents national forest recognition of the importance of the Indian tribe and its need to have access to and the use of certain natural resources existing in the national forests.

The Cleveland National Forest has negotiated a memorandum of understanding (2006) with the Viejas and Ewiiapaayp Bands of Kumeyaay Indians that provides a framework for cooperation between the Cleveland National Forest and the Tribes for the planning, implementation and maintenance of fuels reduction projects. The memorandum of understanding establishes a list of projects that can be pursued jointly by all parties to reduce the risk and threat of wildfires to lives, property and natural resources as part of the management of the Cleveland National Forest and the adjoining Viejas and Ewiiapaayp reservation lands. The Cleveland National Forest has also negotiated a memorandum of understanding (2007) with the Juaneño Band of Mission Indians, Acjachemen Nation that documents the establishment of a procedure to promote the increased cooperation and understanding of ecosystem management between the Forest Service and the Acjachemen Tribe, facilitate better communication and understanding of resource management on the Cleveland National Forest, and enhances the respect of the traditions of the people of the Acjachemen Tribe.

American Indian people have occupied areas in southern California for thousands of years. Archaeological evidence and historical and ethnographic accounts attest to the diversity, longevity and importance that American Indian groups have had in this area.

Nationwide, 45 national forests are located near 86 American Indian reservations in 22 states. The four forests have more than 30 reservations (representing 10 percent of the nation's total) located within 10 miles of the national forests; these national forests are thus directly associated with the largest number of reservations in the state and in the country, more than any other national forest. The reservations range in size from six acres to 36,000 acres. The population of the federally recognized groups associated with these reservations range from seven to 1,685 (with the total population almost 10,800), and the number of individuals actually living on the reservation range from zero to more than 1,470 (BIA 2002).

There are six reservations directly adjacent to the IRAs in the planning area as summarized in Table 33.

**Table 33. Federally Recognized Tribes within the National Forest's Sphere of Influence**

Tribe	ANF	CNF	LPNF	SBNF	Reservation Adjacent to IRA?
Agua Caliente Band of Cahuilla Indians				X	Yes
Augustine Band of Mission Indians				X	
Barona Band of Mission Indians		X			Yes <sup>2</sup>
Cabazon Band of Mission Indians				X	
Cahuilla Band of Mission Indians		X		X	
Campo Band of Mission Indians		X			
Ewiiapaayp Band of Kumeyaay Indians		X			
Inaja/Cosmit Band of Mission Indians		X			Yes
Jamul Band of Mission Indians		X			
La Posta Band of Mission Indians		X			
La Jolla Band of Mission Indians		X			
Los Coyotes Band of Mission Indians		X		X	Yes
Manzanita Band of Mission Indians		X			
Mesa Grande Band of Mission Indians		X			
Morongo Band of Mission Indians				X	Yes
Pala Band of Mission Indians		X			
Pauma/Yuima Band of Mission Indians		X			
Pechanga Band of Mission Indians		X			
Ramona Band of Mission Indians		X		X	
Rincon Band of Luiseño Indians		X			
San Manuel Band of Mission Indians				X	
San Pasqual Band of Mission Indians		X			
Santa Rosa Band of Mission Indians				X	Yes
Santa Ynez Band of Chumash Indians			X		
Iipay Nation of Santa Ysabel		X			
Soboba Band of Mission Indians		X		X	
Sycuan Band of the Kumeyaay Nation		X			
Tejon Indian Tribe			X		
Torres-Martinez Desert Cahuilla Indians				X	
Twenty-Nine Palms Band of Mission Indians				X	
Viejas Band of Kumeyaay Indians		X			Yes

Contemporary uses or concerns have centered on access to national forest resources of cultural or traditional importance and to areas with special or sacred values, often the locales of ceremonial activities. As more people visit and use the four forests, conflicts are common between Native American uses of culturally important areas and other uses of these same areas.

There are also other local tribes, groups and individuals that have not been federally recognized but like the federally recognized tribes, still look to the national forests for traditional and contemporary uses and as part of their ancestral homeland (Table 34). The large urban area surrounding the southern California national forests contains the highest off-reservation Native American population in the nation, most from other parts of the country and many also federally

<sup>2</sup> The Capitan Grande Reservation is shared between the Barona Band and Viejas Band



recognized. They too look to the national forests as a place to maintain traditional and contemporary uses and practices. This sometimes results in conflict between the local and non-local Native American groups.

Studies indicate that American Indians attach deep emotional, symbolic and spiritual meanings for those areas that used to be their traditional lands, including those lands that are publicly owned and managed by government resource management agencies. These perceptions and meanings influence their current lifestyles, environment and quality of life (McAvoy et al., 2001). Researchers also have noted that the dominant society's (in this case, Anglo-Hispanic) sense of place often conflicts and competes with the minority people's (Native Americans) sense of place, resulting in different realities or "contested terrain" that present challenges for public land management agencies (McAvoy et al. 2001).

**Table 34. Non-Federally Recognized Tribes within the National Forest's Sphere of Influence**

Tribe	ANF	CNF	LPNF	SBNF
Esselen Nation			X	
Fernandeño-Tataviam	X			
Gabrieliño-Tongva Tribal Council of San Gabriel	X			
Gabrieliño-Tongva Tribal Council of the Gabrieliño-Tongva Nation	X			
Gabrieliño-Tongva Indians of California	X			
Kawaiisu Tribe			X	
Intertribal Council of Tongva	X			
Juaneño Band of Mission Indians Acjachmemen Nation (multiple)		X		
Ohlone Bear Clan			X	
San Luis Rey Band of Mission Indians		X		
Salinan Tribe			X	
Tehachapi Indian Tribe	X			

## Recreation

The focus of outdoor recreation management is to provide a wide range of environmentally sustainable opportunities in natural settings in order to meet the needs and desires of visitors.

The population within the southern California national forest planning boundary is 34.3 million people, an increase of 9.8 percent since 2000. Ethnic and racial diversity has also increased (2010 Census data).

Outdoor recreation remains a growing use within many national forests and grasslands. However, it has decreased in three of the four forests as described below (Table 35, Forest National Visitor Use Monitoring Reports). Year-round recreation remains the predominant use of the urban southern California national forests with more than seven million annual visits, ranking them among the most heavily recreated forests in the nation. Most visits to the four forests continue to be local in origin. Demographic and population shifts as well as lifestyle changes have created unprecedented challenges for national forest outdoor recreation managers (A Framework for Sustainable Recreation, USFS, 2010). Table 35 displays forest visitation.

**Table 35. National Forest Visitation**

National Forest	Visitation	Fiscal Year
Angeles	3,181,000	2006
	3,500,000	2001
Cleveland	480,000	2009
	792,603	2002
Los Padres	924,000	2009
	1,516,785	2002
San Bernardino	2,443,000	2009
	1,953,634	2003

### Recreation Setting

Visitors choose specific settings for their activities to enjoy desired experiences. These settings vary by place and are further refined by the Recreation Opportunity Spectrum (ROS), a classification system that describes different settings across the national forests. The system uses five classes that range from highly modified and developed settings to primitive, undeveloped settings. See the FEIS (page 246) for ROS setting definitions and other information.

There have been changes in the ROS classes of the southern California national forests since adoption of the LMP. These changes reflect the inclusion of 66,779 acres from the semi-primitive and semi-primitive non-motorized ROS categories into the primitive ROS category due to the creation of five new wilderness areas in the Angeles, Cleveland and San Bernardino National Forests through the ‘Omnibus Public Land Management Act of 2009’.

### Visitor Use, Participation and Satisfaction

Visitor use, participation and satisfaction are measured by the National Visitor Use Monitoring (NVUM) system. Analysis of the most recent visitor use, participation and satisfaction is summarized in the project records. The complete reports for the Angeles (2006), Cleveland (2009), Los Padres (2009) and San Bernardino (2009) National Forests may be viewed and downloaded individually and/or combined from the [NVUM Web site](#).

### Developed Recreation

Developed recreation facilities have been constructed to offer recreation experiences, protect resources or otherwise manage visitor activities. There is one facility within the inventoried roadless areas addressed in this SEIS. The Ribbonwood Campground is located on the San Jacinto Ranger District of the San Bernardino National Forest in the Cactus Springs B IRA. Information for the facility is provided in the recreation section of the project record and is summarized below:

- Located approximately 16 miles southeast of Palm Desert, this dual use (family and group) campground, approximately 10 acres in size, is situated in a high desert chaparral environment and was constructed in 1995.
- It is open year-round and primarily occupied on weekends during the fall, winter and spring due to its location in the high desert.

- The access road into the facility (NFSR 7514) is 0.3 miles long and the loop road around the campground (NFSR 7514.A) is 0.3 miles long for a total of 0.6 miles of gravel surfaced road.
- It is adjacent to the existing Santa Rosa Wilderness.

### **Dispersed Recreation**

Dispersed recreation occurs where there are few or no developed facilities present. Many of the southern California national forest inventoried roadless areas addressed in this SEIS have relatively little dispersed recreation due to their remote backcountry locations, steep slopes, minimal trails and heavy, often impenetrable chaparral at low to mid-elevations. However, there are some areas that, due to their presence near urban population centers in Orange and San Diego counties, host significant amounts of dispersed recreation use. Some of the different dispersed recreation opportunities are described below.

#### Dispersed Camping

Dispersed (also known as remote or primitive) camping occurs outside of developed campgrounds. It occurs in both wilderness and non-wilderness areas, with or without a vehicle; however, most dispersed camping use occurs by vehicle. Use remains generally light (except for seasonal summer, weekend, holiday, and deer hunting season) and is locally variable (more use in forested areas with level ground near water).

Management of this activity varies among national forests and is further described below by Forest:

- Angeles National Forest: Generally allowed forest-wide except where posted signs specify otherwise.
- Cleveland National Forest: Remote camping is not allowed within the Trabuco, Ladd, or Coldwater Inventoried Roadless Areas. Remote camping is allowed within other inventoried roadless areas and the undeveloped areas are subject to restrictions. Hiking, camping, picnicking, hunting, fishing and biking is discouraged within the King Creek Research Natural Area of the Sill Hill Inventoried Roadless Area.
- Los Padres National Forest: Generally allowed forest-wide except where posted otherwise. The Los Padres has high visitor use areas where dispersed camping is restricted. Designated recreation areas also limit camping to developed campgrounds.
- San Bernardino National Forest: Generally allowed throughout much of the Forest with some use restrictions, a combination of designated sites, areas, and “yellow post” sites. Yellow post sites are designated campsites on the San Bernardino National Forest within remote areas on back roads or trails where campfires are allowed as long as the fire stays within the designated fire ring and fire restrictions allow.

The Forest Plans estimated the capacity and availability of potential dispersed vehicle camping opportunities by land use zone. This analysis resulted in approximately two percent of the total National Forest System land base in southern California being available as potential dispersed vehicle camping. Recent estimates of this activity participation range are shown in the NVUM reports which are on file at Forest offices.

### Driving for Pleasure

Driving for pleasure generally occurs outside of the four forests inventoried roadless areas addressed in this SEIS and visitors view these areas as a scenic backdrop. Recent estimates of this activity participation range are shown in the NVUM reports.

### Wildlife and Nature Viewing

Wildlife and nature viewing activities in southern California remain popular but limited due to the large human presence and rapid urbanization. Wildlife and nature viewing opportunities at the national forests remains widespread and mostly unrestricted. Recent estimates of this activity participation range are shown in the NVUM reports.

### Snow Play

There are no designated dispersed snow play areas within the four national forest inventoried roadless areas identified in this SEIS. Some informal snow play does occur near the Antimony Inventoried Roadless Area within the Los Padres National Forest.

### Water Play

Water play is an activity defined as sitting by, wading through or swimming in streams and lakes (especially during the warmer summer months).. There may be associated activities in or near adjacent riparian areas, including picnicking, large family gatherings, and cooking. Water play use is very high in the lower elevation canyons of the Angeles National Forest, including the Westfork/West Fork roadless areas in San Gabriel Canyon. Visitors hike to waterfalls inside some of the roadless areas and undeveloped areas within the Cleveland National Forest. Heavy water play use occurs in the Cedar Creek Falls area, some of which is located within the Eagle Peak Inventoried Roadless Area. Water play use is also increasing at the Three Sisters Falls area within the Eagle Peak IRA. Recent estimates of this activity participation range are shown in the NVUM reports.

### Hang Gliding

"Silent soaring" consists of hang-gliding and paragliding. No specific NVUM data is available for current use estimates but Forest managers estimate that relatively few people participate in this activity. Popular, informal hang-gliding take-off spots in inventoried roadless areas addressed in this SEIS are listed below (Table 36).

**Table 36. Hang Gliding Take-off Locations in Southern California National Forest IRAs**

Site Name/IRA	Location	Forest
Plowshare/Spoor Canyon	Plowshare Peak Electronic Site, Sierra Madre mountains, approximately 2.5 miles of Highway 166	Los Padres
Pine Mountain (North and South Launches)/Sespe-Frazier (ORD)	Two locations adjacent to Pine Mountain Ridge Road, 10 miles north of Ojai	Los Padres
Nordhoff Ridge/ (Nordhoff Peak and Chief Peak)/Sespe-Frazier	Two locations near Nordhoff Ridge road, approximately 3.5 miles north of Ojai	Los Padres
Cucamonga/Cucamonga B	Near Cucamonga Peak, 10 miles due west of the I-15 and I-215 intersection	San Bernardino

*Information from the U.S. Hang Gliding Association, as verified by the Forest Service*

### Rock Climbing

Rock climbing is popular within the Eagle Peak Inventoried Roadless Area of the Cleveland National Forest. Rock climbing and canyoneering areas are not designated on the four forests.

### Recreational Target Shooting

Recreational target shooting sites (such as gun clubs and concession-operated shooting ranges under special use authorization to the Forest Service) have structured settings similar to facilities found on private land; other shooting areas on the national forests have less intensively managed shooting opportunities. The following information discusses recreational target shooting for the southern California national forests with a focus on the planning area.

- Angeles National Forest: There have been no changes since the LMP was issued in 2006. The Forest is closed to target shooting except at designated sites. The ‘A Place to Shoot’ concession-operated site is in and adjacent to the Red Mountain Inventoried Roadless Area (located within the southeastern portion of the area). There are approximately 15 acres in this range which includes target structures, roads and constructed dirt backdrops.
- Cleveland National Forest: The Forest is closed to target shooting except for an open shooting area along the Palomar Divide Road located inside of the Barker Valley Inventoried Roadless Area.
- Los Padres National Forest: There have been no changes since the LMP was issued in 2006. The Forest is mostly open without special restrictions. There are two gun clubs under permit and a few designated recreational target shooting areas.
- San Bernardino National Forest: There have been no changes since the LMP was issued in 2006. A mixture of open, restricted and closed recreational target shooting areas exist. No shooting is allowed within the inventoried roadless areas addressed in this SEIS.

### Hunting and Fishing

There are no changes to hunting or fishing opportunities which are permitted and regulated by the California Department of Fish and Wildlife within the southern California national forest inventoried roadless areas addressed in this SEIS since the adoption of the LMPs. Hunting is discouraged within the King Creek Research Natural Area located in the Sill Hill Inventoried Roadless Area of the Cleveland National Forest. Recent estimates of these activity participation ranges are shown in the NVUM reports.

### **Recreation Special Use Authorizations**

There have been minimal changes to the few recreation opportunities offered in partnership with commercial and non-commercial entities through special use authorizations within the southern California national forests inventoried roadless areas addressed in this SEIS since the adoption of the LMPs. Ultra-trail running competitive events have occurred in a few areas, including a portion of the Trabuco roadless area.

### Recreation Residences

Recreation residences are privately built and owned structures on National Forest System land. None exist within southern California national forests inventoried roadless areas addressed in this SEIS. However, there are some immediately adjacent to several roadless areas.

### Winter Sports

Winter sports opportunities by special use authorization within the southern California national forests include downhill skiing and snowboarding, Nordic skiing, and snow play. Approximately two acres of the Mt. Baldy Ski Lifts special use permit (administered by the Angeles National Forest) overlaps the northwestern corner of the Cucamonga B inventoried roadless area within the San Bernardino National Forest. This overlap includes an access road and water pond. There are no other winter sports opportunities within the southern California national forests inventoried roadless areas identified in this SEIS.

### **Trends and Projections**

Population growth continues to drive an increase in southern California national forest outdoor recreation demand. The population within the southern California national forest planning boundary is now 34.3 million people, an increase of 9.8 percent since 2000. Ethnic and racial diversity has also increased (2010 Census data). Additional population and demographic diversity growth is expected by the year 2020.

Year-round recreation remains the predominant use of the urban southern California national forests with more than seven million annual visits, ranking them among the most heavily recreated forests in the nation (NVUM Reports).

### **Conservation Education, Volunteers and Partnerships**

Volunteers help the four forests serve visitors and protect and restore natural resources and recreation facilities. The four forests reported that during fiscal year 2010, about 12,157 volunteers and hosted programs contributed 290,986 hours of work (140 person years) with an estimated value of \$5,957,643. The average volunteer contributed 24 hours of work (Forest 1800-6 Annual Reports, available in the project records).

Conservation education is a broad category that includes interpretation, environmental education and visitor information. Since the adoption of the 2006 LMP, one additional Conservation education program on the Angeles National Forest has been started.

The Southern California Consortium (SCC) is an environmental education, outreach, and recruitment, kindergarten through employment program whose focus is to educate underserved urban communities. The program’s three main components are: Community, Environmental Education, and Employment.

## Wilderness

There are 26 designated wilderness areas totaling more than 1,241,913 acres within the four southern California national forests. This includes 66,779 acres in five new wilderness areas or additions to existing wilderness legislatively designated (through the ‘Omnibus Public Land Management Act of 2009’) since the LMP was implemented in 2006 as displayed in Table 37. See also the San Bernardino National Forest Plan Amendment of September 30, 2010 for additional information.

**Table 37. Southern California National Forest Wilderness Designated since 2005**

Wilderness	National Forest	National Forest Acres	Other Ownership Acres	Total Acres
Magic Mountain	Angeles	12,282	0	12,282
Pleasant View Ridge	Angeles	26,757	0	26,757
Agua Tibia	Cleveland	1,508	520	2,028
Cahuilla Mountain	San Bernardino	5,585	0	5,585
South Fork San Jacinto	San Bernardino	20,217	0	20,217
TOTAL ACREAGE*		66,259	520	66,779

\*Acreages are approximate.

These 2009 additions to the National Forest Wilderness System contain legislative language that permits pre-suppression vegetation management activities.

There continues to be public and legislative interest in adding other lands to the National Wilderness Preservation System, either as additions to existing wilderness or as new wilderness. Pending legislation includes the 2010 California Desert Protection Act, 2012 Los Padres Conservation and Recreation Act, 2011 Angeles and San Bernardino National Forests Protection Act and 2011 Beauty Mountain and Agua Tibia Wilderness Act.

There are 67 grazing allotments with 145,031 suitable acres in wilderness, almost all on the Los Padres National Forest. Some of the allotments are vacant or closed.

Recreation use within the four forests wildernesses is apparently decreasing. Even if use is decreasing, wilderness values and resources, naturalness, wildness and solitude may still be affected. Without appropriate management, the quality and values of wilderness may be compromised. Table 38 displays designated wilderness visits.

**Table 38. Designated Wilderness Visits**

National Forest	Visitation*	Fiscal Year
Angeles	34,000	2006
	100,000	2001
Cleveland	15,000	2009
	31,616	2002
Los Padres	64,000	2009
	123,139	2002
San Bernardino	85,000	2009
	87,509	2003

\*Forest National Visitor Use Monitoring Reports

National trends from the 2010 Resource Planning Act (RPA) Assessment ([General Technical Report WO-87](#)), page 151, indicate that the activity of ‘Visit a Wilderness’ increased by 17.7% to 79.1 million visitors from the 1999-2001 period to the 2005-2009 period. This data is from the National Survey on Recreation and the Environment. However, other data in this RPA (page 160) projects a potential future decline in visiting primitive areas (which includes wilderness) due to increased population density and declines in wilderness acres per capita.

See Appendix 2 of the SEIS for a complete set of the Inventoried Roadless Area Analyses for the four forests.

## Wild and Scenic Rivers

Five wild and scenic rivers have been designated since the LMP was implemented in 2006 through the ‘Omnibus Public Land Management Act of 2009’. They include 7.25 miles within the Angeles and Los Padres National Forests and 31.52 miles within the San Bernardino National Forest, as described below. Additional information on these rivers can be found in the project record.

### *Angeles and Los Padres National Forests- Piru Creek*

- Piru Creek Wild and Scenic River flows through the Sespe Wilderness area. It is managed by the Los Padres National Forest.
- A 7.25 mile segment was designated a National Wild and Scenic River: Wild - 4.25 miles, Recreation - 3.0 miles.
- Outstanding Remarkable Values: Managed by the Forest Service to protect habitat and the California Department of Fish and Wildlife for wild trout populations. It provides riparian habitat to the federally listed southwestern willow flycatcher, least Bell’s vireo and California condor. The high demand for low-elevation recreation along riparian areas can be observed at the Frenchman’s Flat day use area. Geological values were determined to be remarkable including scenic tilted layers of sedimentary rocks as well as faults and rock formation with features crucial to the understanding of geological formation of the west coast of North America.



### *San Bernardino National Forest- Bautista Creek*

- A 9.8-mile segment of Bautista Creek was designated as a Recreational River.
- Outstanding Remarkable Values: Bautista Creek has outstandingly remarkable values for wildlife, botany, prehistory and history. Wildlife values are based on the presence of several federally endangered species. Evidence of Native American use of Bautista Creek Canyon is present. This evidence reflects all aspects of Native American life, and has exceptional human interest value to the local Native American and Tribal community as well as scientific value. Ethnographic research has documented Native American place names for areas within the drainage. The Canyon meets standards for Traditional Cultural Property as highly significant. The Creek's historic context relates to the passages of Juan Bautista de Anza in 1774 and again in 1776. The Canyon was also used as a route in the earliest efforts to reach the San Francisco Bay area from Sonora, Mexico.

### *San Bernardino National Forest- Fuller Mill Creek*

- A 3.5 mile segment was designated a National Wild and Scenic River as follows: a 2.6-mile segment as a Scenic River and a 0.9-mile segment as a Recreational River.
- Outstanding Remarkable Values: Fuller Mill Creek is free-flowing from its headwaters to the intersection with the North Fork of the San Jacinto River, and water flows intermittently for some of its length during the mid to late summer and fall. This creek exhibits outstandingly remarkable values pertaining to wildlife as it is home to a nationally significant population of mountain yellow-legged frog. It also supports one of the last remaining populations of this federally endangered species in southern California and the only known population on the San Jacinto Ranger District. Other Forest Service Region 5 sensitive species (the California spotted owl and San Bernardino flying squirrel) are also present in the river corridor.

### *San Bernardino National Forest- Palm Canyon Creek*

- An 8.1-mile segment of Palm Canyon Creek was designated a National Wild and Scenic River for classification as a Wild River.
- As required by the Omnibus Public Land Management Act of 2009, the Secretary of Agriculture shall enter into a cooperative management agreement with the Agua Caliente Band of Cahuilla Indians to protect and enhance river values.
- Palm Canyon is adjacent to the Pyramid Peak A Inventoried Roadless Area.
- Outstanding Remarkable Values include: Spectacular scenery includes deep, rugged, rocky canyons, thick riparian vegetation, and a palm oasis found within the Palm Canyon landscape. Evidence of Native American use of Palm Canyon, especially for the last two thousand years is present. This evidence reflects all aspects of Native American life, and has exceptional human-interest value to the local Native American and Tribal community as well as scientific value. The Canyon is located in the heart of Cahuilla ethnographic territory and the Cahuilla continue to use the area for traditional practices. The Canyon meets standards for Traditional Cultural Property as highly significant. The Palm Oasis within Palm Canyon is recognized as having outstandingly remarkable habitat value due to both a location that supports the largest California fan palm oasis in the United States and the abundance of these native palms (relics from millions of years ago that are nationally significant and unique). It

is free of impoundments, inaccessible except by trail, and in a primitive watershed with unpolluted waters.

#### *San Bernardino National Forest- North Fork San Jacinto River*

- A 10.12 mile segment was designated a National Wild and Scenic River as follows: 7.18 miles as wild, 2.26 miles as scenic, and 0.68 miles as Recreation.
- Outstanding Remarkable Values include: The scenery along the river is diverse, ranging from dramatic, high elevation, rocky alpine to middle elevation mixed conifer and oak woodland to lower elevation chaparral and grassland. Suitable habitat for mountain yellow-legged frog exists in the headwater tributaries. The San Jacinto State Park segment is free of impoundments, inaccessible except by trail, and is located in a primitive watershed with unpolluted waters; therefore making it eligible as a wild river. The segment lying within the national forest is readily accessible by road and trail and has some recreation improvements along its shore, which allows for its recreational river classification.

### **Landscape Management**

The rugged wildland landscapes of southern California (which visually represent our western frontier heritage) are increasingly valued for the visual contrast they provide in a rapidly urbanizing region. The contrast between the urban and natural settings is the unique characteristic that distinguishes this area from other regions of the country. As the resident population continues to increase, so too will the desire to conserve these remaining vestiges of regional open space and scenic heritage in a natural-appearing condition.

National forest visitation has increased over the past two decades because of the area's population growth. Driving for pleasure and viewing scenery have become some of the more popular national forest activities. Visitors expect a certain level of 'naturalness' in the recreation and tourism settings they pursue. Even individuals who have never visited these national forests expect a certain level of 'natural intactness' in these landscapes. This natural beauty contributes to their sense of well-being and quality of life. The scenic integrity of national forest landscapes (which measures landscapes' inherent scenic attractiveness and the public's visual expectations for naturalness) is the system by which projected alterations in national forest landscapes are evaluated.

### **Landscape Attractiveness**

National forest landscapes provide a variety of outdoor recreation settings, ranging from the jagged Pacific Ocean coastline of central California to the high-elevation 'big-tree' conifer forests of the Transverse Range. The most attractive landscapes (or those classified as scenic attractiveness class A (SAC-A)) are located where the highest combination of landform, water form, rock form and vegetation variety occurs. SAC-A landscapes represent approximately 19 percent of the landscapes within the national forests. The more common landscapes of the region (or those classified as scenic attractiveness class B (SAC-B)) consist of steep chaparral-covered mountains intermixed with foothill and valley areas consisting of oak woodland and grassland. The remaining landscapes (approximately 8 percent of the land base) are less distinctive or scenic attractiveness class C (SAC-C) (Table 39).

**Table 39. Landscape Attractiveness- Acres and Percent of Total Acres by Class and Forest**

Scenic Attractiveness Class	Angeles	Cleveland	Los Padres	San Bernardino
SAC A - Distinctive Landscapes	157,100 24%	66,065 16%	248,670 14%	211,160 32%
SAC B - Typical Landscapes	482,825 74%	329,967 78%	1,497,782 84%	247,418 38%
SAC C - Indistinctive Landscapes	15,930 2%	24, 845 6%	34,925 2%	207,175 30%

Landscape Attractiveness within the IRAs

A detailed breakdown of Scenic Attractiveness Classes (SAC) by each Forest’s individual IRAs is summarized in the project records. The summary includes a breakdown of what current Land Use Zones each acreage of SAC falls under. Table 40 summarizes the data and breaks down the Landscape Attractiveness within the IRAs of each Forest by Acres and Percent of Total Acres, by Class and Forest.

**Table 40. Landscape Attractiveness within the IRAs- Acres and Percent of Total Acres, by Class and Forest**

Scenic Attractiveness Class	Angeles IRAs	Cleveland IRAs	Los Padres IRAs	San Bernardino IRAs
SAC A - Distinctive Landscapes	7,754 10%	19,324 23%	49,568 12%	24,347 49%
SAC B - Typical Landscapes	66,737 89%	59,402 70%	359,092 85%	9,258 19%
SAC C - Indistinctive Landscapes	432 1%	5,682 7%	10,866 3%	16,292 32%

**Visual Expectations of the Public**

National forest visitors are attracted to a variety of areas for the natural character they possess. Visitors and residents value the forested backdrops that frame the urban complex. The transportation network and associated use areas provide visitors with scenic routes and vantage points to experience the region's seemingly endless expanse of rugged backcountry depicted in American cinema. Adventure seekers particularly treasure the hidden seldom-seen valleys and canyons.

National forest travel routes have been evaluated for the estimated level of public concern for alterations to the landscape. Travel routes classified as concern level 1 (including those routes that are designated state scenic highways or national forest scenic byways) indicate that the public is most concerned about alterations; concern level 3 indicates the least concern. In evaluating landscape visibility, landscape managers have recognized that "distance" is one of the primary perceptual factors for determining whether alterations are visually noticed. Foreground distance zones reveal even the subtlest alterations; background distance zones are able to absorb greater alterations, provided color contrasts are minimized. Some of the more secluded areas of the national forests are identified as “seldom seen” indicating that they are visible only from aerial viewpoints.

"Key Places" in the planning area represent the most picturesque national forest locations. These Places possess their own distinct landscape character and are particularly valued for their scenic quality. They generally serve as urban backdrops or recreation-destination settings, or they contain scenic features along scenic routes and byways. Table 41 displays the national forest distribution of Key Places. Projected alterations in the landscape character of selected Key Places will be examined in further detail at the project level.

**Table 41. Key Places Valued for Scenic Quality**

National Forest	Key Place	Acres
Angeles	Angeles High Country	100,560
	Angeles Uplands West	68,792
	Front Country	101,232
	Liebre-Sawmill	17,094
	Mojave Front Country	52,610
	Santa Clara Canyons	140,824
	Soledad	59,338
Cleveland	Aguanga	47,895
	Elsinore	46,729
	Morena	49,568
	Laguna	30,183
	Palomar	23,940
	Pine Creek	33,561
Los Padres	Big Sur	82,718
	Cuesta	42,187
	Highway 33	109,150
	Ojai-Piru Front	59,453
	Santa Barbara Front	57,161
San Bernardino	Arrowhead	36,663
	Big Bear	39,078
	Big Bear Back Country	63,889
	Front Country	13,079
	Garner Valley	38,451
	Idyllwild	44,361
	Lytle Creek	42,384
	San Bernardino Front	84,566
	San Gorgonio	99,925
	Santa Rosa & San Jacinto Mtns	63,726

Visual Expectations of the Public within IRAs

A detailed breakdown of how many acres per IRA fall within the Key Places of each respective Forest is summarized in the project record. The data provides the acreage of individual Key Places by the current Land Use Zone within each IRA. Table 42 summarizes that data showing the number of IRA acres within the Key Places of each respective Forest.

**Table 42. Key Places Valued for Scenic Quality within the IRAs**

National Forest	Key Place	Acres within IRAs
Angeles	Angeles High Country	0
	Angeles Uplands West	1,741
	Front Country	22
	Liebre-Sawmill	966
	Mojave Front Country	0
	Santa Clara Canyons	59,433
	Soledad	0
Cleveland	Aguanga	7,032
	Elsinore	10,079
	Morena	0
	Laguna	0
	Palomar	10,863
	Pine Creek	0
Los Padres	Big Sur	0
	Cuesta	1,792
	Highway 33	63,842
	Ojai-Piru Front	28,749
	Santa Barbara Front	15,450
San Bernardino	Arrowhead	0
	Big Bear	0
	Big Bear Back Country	0
	Front Country	3,190
	Garner Valley	139
	Idyllwild	0
	Lytle Creek	12,848
	San Bernardino Front	14,513
	San Gorgonio	15
	Santa Rosa & San Jacinto Mtns	18,366

**Scenic Integrity Objectives**

Landscape management is used to meet people's scenery expectations for the management of national forest landscapes. To ensure that scenic integrity is maintained, five scenic integrity

objectives (SIOs) derived from the landscape's attractiveness and the public's expectations or concerns are used to manage the scenic resources. Each scenic integrity objective depicts a level of scenic integrity used to direct landscape management: very high (unaltered), high (appears unaltered), moderate (slightly altered), low (moderately altered), and very low (heavily altered). Generally, landscapes that are most attractive (as classified by scenic attractiveness class) and are viewed from popular travel routes (as classified by concern level) are assigned higher scenic integrity objectives. The methodology for establishing scenic integrity objectives is provided in Forest Service Agriculture Handbook 701.

Under the current LMP, the national forest land base would be largely managed to maintain a natural undeveloped appearance, with assigned SIOs of high and very high (Angeles National Forest 92 percent, Cleveland National Forest 93 percent, Los Padres National Forest 90 percent, and San Bernardino National Forest 98 percent). About seven percent of the land base (292,305 acres) could have a modified appearance, with an assigned SIO of moderate. No landscapes are managed with an assigned SIO of low. Landscapes remain natural-appearing along the most popular travel routes (concern level 1).

Scenic Integrity Objectives within the IRAs

Table 43 summarizes the number and type of SIO acres that fall within the IRAs by Forest. A detailed SIO analysis by IRA is available in the project record.

**Table 43. Scenic Integrity Objectives within the IRAs- Acres and Percent of Total by Scenery Integrity Objective (SIO) and Forest**

SIO	Angeles	Cleveland	Los Padres	San Bernardino
Very High	8 > 1%	0 0%	6,243 2%	18,239 37%
High	59,057 79%	78,109 93%	340,711 81%	31,321 63%
Moderate	15,859 21%	6,300 7%	72,572 17%	337 > 1%
Low	0 0%	0 0%	0 0%	0 0%
Very Low	0 0 %	0 0%	0 0%	0 0%

In some landscapes, human influence is evident through changes in vegetation patterns, landform alterations or the introduction of structural elements. For the most part, the four forests' landscapes remain natural-appearing in character, with many of the valued landscape attributes still intact. Most of the human-influenced alterations affecting landscape scenic integrity have occurred on the San Bernardino National Forest; the Los Padres National Forest provides the largest area of landscapes that possess an unaltered character. Heavily altered or unacceptably altered landscapes in Key Places are the priority areas for landscape restoration.

**Law Enforcement**

As described in the FEIS (Page 270), the ability to provide law enforcement services on public lands is an important component in the day-to-day management of the national forests and for the overall success of the Forest Service's mission of resource protection and public service. The

Forest Service, other federal agencies, state, and county law enforcement agencies share law enforcement jurisdiction on National Forest System lands. In addition to law enforcement, the County Sheriffs have jurisdiction for search and rescue operations.

A wide variety of unlawful actions occur on the southern California national forests as summarized in the FEIS on page 272, including unauthorized off-highway vehicle use, camping and campfire violations, vandalism, and arson. The remoteness of the IRAs combined with the limited public use make them more susceptible to other forms of criminal activities such as smuggling, drug trafficking, methamphetamine production, and marijuana cultivation (FEIS page 272). In particular, marijuana cultivation on NFS lands has increased since the publication of the FEIS. Although the amount of plants eradicated can vary by year (FEIS page 272), the Angeles, Los Padres and San Bernardino National Forests each reported eradicating over 200,000 cannabis plants in 2008 (NDIC 2009). Illegal marijuana cultivation was noted in the evaluations for the Coldwater, Ladd, and Trabuco IRAs on the Cleveland National Forest, and Madulce-Buckhorn IRA on the Los Padres National Forest.

Border security is an important component of law enforcement on the southern California national forests, particularly on the Cleveland National Forest (FEIS page 273). The Forest Service and the Border Patrol operate under a national level MOU between the USDA, DOI and DHS signed in 2006. This MOU outlines the agreements for use of roads, access to wilderness study areas or designated wilderness, and motorized access to areas off-road. Under the MOU, the Border Patrol has full access to the NFS road and trail system. Off-road access is allowed under exigent circumstances, including off-road access in recommended or designated wilderness areas. Administrative access for motorized patrol or for security improvements to recommended wilderness or designated wilderness is subject to a minimum tool or requirement analysis. The Sill Hill and No Name IRAs on the Cleveland National Forest are 23 miles from the international border with Mexico and are the closest IRAs to the border. The Eagle Peak, Cedar Creek, and Upper San Diego River IRAs are within 30 miles of the border, and the southern end of the Barker Valley and Caliente IRAs are within 50 miles of the border. There were no border security issues noted in the IRA analysis for these areas.

Access to the national forests is a key factor for detecting and preventing criminal activity and apprehending violators (FEIS page 274). Access to and within the IRAs is limited because of the general lack of roads as described in the transportation system section of this SEIS. Although the public is limited to roads and trails designated for motorized use, motorized access for law enforcement and emergency responders in any part of the national forest is exempt from the restrictions identified in the MVUM if they are responding to an emergency or law enforcement action, including pursuit (36 CFR § 261.13). Restrictions within wilderness are not subject to this exemption; however, the Forest Supervisor for each forest may allow mechanized or motorized transport in emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means. These emergencies can include situations related to health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations (FSM 2326.1). Use of motorized equipment in recommended or designated wilderness for non-emergency law enforcement purposes (patrol or site remediation) would be subject to review and approval based on a minimum tool or minimum requirement analysis.

County Sheriffs' operate search and rescue missions when needed to assist lost or injured visitors or workers on the national forests. These operations can occur anywhere they are needed but

happen most often in heavy public use areas. Increased search and rescue operations were noted in the IRA analysis for the Eagle Peak IRA and were associated with the increase in use of the area, including Cedar Falls and Three Sisters. The Cedar Falls area can be reached by ATVs on the Eagle Peak road, by four wheel drive from Barona, or by helicopter. Three Sisters is accessible by foot or helicopter.

## Facility Operations and Maintenance \_\_\_\_\_

### Roads

As described in the FEIS on pages 275 to 281, the southern California national forest transportation system includes a combination of state, county, and National Forest System roads. At the time the FEIS was published, the southern California national forest transportation system included 3,780 miles of forest-managed roads that provide access to and through National Forest System land.

NFS roads that are open to the public for motorized travel are established by travel management decisions and are designated on Motor Vehicle Use Maps (MVUM) for each forest. The complete index of maps for all national forests is online at [the Forest Service MVUM website](#).

If a road or trail is not shown as open on the MVUM, it is not open for public motorized travel. Decisions to designate a road for public motorized travel are made pursuant to 36 CFR Part 212 Subpart B, Designation of Roads, Trails, and Areas for Motor Vehicle Use. The final rule was published in November 2005 and implemented over several years. Designation is complete for the four forests and the maps are available at the link above.

The transportation system also includes private roads authorized by permit or easement. These roads are authorized to provide private access to grazing, mining, special uses, or private lands, and are not open to public use. They do not appear on the Motor Vehicle Use Maps.

For analysis purposes the roads within the planning area are grouped into three categories as follows:

**State roads** – this includes a small portion of State Highway 33 that is overlapped by the Dry Lakes IRA.

**County roads** – this includes all roads managed by local counties. Most of the county roads included in the analysis are on the edge of IRAs, and the overlap is most likely an unintentional mapping error. The Eagle Peak road, managed by San Diego County, is not open for public motorized vehicle travel.

**Forest Service roads** – this includes all open roads maintained by the Forest Service. Some of these roads may be subject to seasonal or long term closures. Decommissioned roads are not included.

**Permitted roads** – this includes all roads authorized by a special use authorization, grazing permit, or mining operating plan.

As shown in Table 44 there are approximately 174 miles of roads located within the planning area. Of those roads, about 89 miles of roads are managed by the Forest Service. About 76 miles of roads are authorized under permit or easement, and 8 miles are managed by county jurisdictions. The planning area also includes short sections of State Highway 33 that is



overlapped by the Dry Lakes IRA. The changes to that analysis area between the Draft and Final SEIS added about 7 miles of road to the analysis, including Forest Service road 7N13.1 on the Angeles National Forest, an additional section of the Eagle Peak Road on the Cleveland National Forest, and additional sections of Forest Service road 2S01 on the San Bernardino National Forest. The Forest Service roads added to the analysis are administrative use roads and not open to the public.

**Table 44. Miles of Road within the Planning Area**

<b>Forest/Road Jurisdiction</b>	<b>Miles</b>
<b>Angeles</b>	<b>11.4</b>
County Roads	0.3
Forest Service Roads	9.2
Permitted Road	2.0
<b>Cleveland</b>	<b>5.8</b>
County Roads	4.7
Forest Service Roads	12.5
Permitted Roads	8.6
<b>Los Padres</b>	<b>125.8</b>
State Roads	0.3
County Roads	2.9
Forest Service Roads	57.7
Permitted Roads	64.9
<b>San Bernardino</b>	<b>10.7</b>
Forest Service Roads	10.0
Permitted Roads	0.8
<b>Total</b>	<b>173.7</b>

An emphasis of the OHV program on the Angeles National Forest is the identification of routes to be recommended to become part of the California Back Country Discovery Trail system in the Liebre-Sawmill Place (Angeles LMP Part 2, page 58). Short segments of the Liebre-Sawmill road (one of the candidate roads) are located within the Fish Canyon IRA. The other LMPs do not identify specific opportunities for the California Back Country Discovery Trail, but the general opportunity is identified in the Los Padres LMP (Los Padres LMP Part 2, page 135).

There are also many user created routes within the planning area. These routes are not authorized for any purpose and are not designated as NFS roads or trails. The condition of these routes varies greatly, and many are impassible. They may be decommissioned as funding allows based on site specific analysis. Based on the current inventory of unauthorized routes, Table 45 summarizes the miles of unauthorized routes within the planning area by forest.

**Table 45. Miles of Unauthorized Routes within the Planning Area by Forest**

<b>Forest</b>	<b>Miles of Unauthorized Routes</b>
Angeles	19.5
Cleveland	44.7
Los Padres	80.9
San Bernardino	42.7
<b>Total</b>	<b>187.8</b>

### Non-Motorized Trails

The transportation system includes both motorized and non-motorized trails. As described in the FEIS on page 283, the non-motorized trail system is an important part of the Dispersed Recreation Program. These trails provide visitors with an opportunity to access the national forest backcountry, whether for a sedate afternoon nature walk, a vigorous mountain biking adventure or a challenging multi-day backpacking trip.

For analysis purposes the trails are grouped according to their designed use. Although the trails are typically open to all non-motorized users (with the exception of the Pacific Crest National Scenic Trail), the designed use reflects the standard to which the trail is constructed and maintained. As an example, a trail designed for pack and saddle stock could also be used by hikers and mountain bikes.

As summarized in Table 46, there are approximately 192 miles of non-motorized trails within the planning area. The change in the planning area boundary between the Draft and Final SEIS added some short sections of hiking trail on the Angeles National Forest.

**Table 46. Miles of Non-Motorized Trail within the Planning Area by Forest**

<b>Forest/Designed Use</b>	<b>Miles of Non-motorized Trails</b>
<b>Angeles</b>	<b>26.4</b>
Hiking	26.4
<b>Cleveland</b>	<b>47.2</b>
Bicycle	30.9
Hiking	1.5
Pack and Saddle	14.9
<b>Los Padres</b>	<b>93.3</b>
Hiking	0.3
Pack and Saddle	93.0
<b>San Bernardino</b>	<b>25.4</b>
Hiking	4.0
Pack and Saddle	21.4
<b>Total</b>	<b>192.3</b>

The trails are not evenly distributed within each forest. The Angeles National Forest trails are primarily in the Fish Canyon IRA and provide access through the center of the area. On the

Cleveland National Forest, most of the system trails are in the Trabuco, Barker Valley, or the Caliente IRA. Mountain bike use in Trabuco IRA is popular, with the trail system managed around that use. On the Los Padres National Forest, non-motorized trails are concentrated in the Black Mountain, Fox Mountain, Madulce Buckhorn, and Sespe-Frazier IRAs. On the San Bernardino National Forest, the pack and saddle trails are primarily located in Pyramid Peak A IRA.

Approximately 17 miles of the Pacific Crest National Scenic Trail (PCT) traverse the Caliente, Pyramid Peak A, Tule, and Fish Canyon IRAs. Use of the PCT is limited to hikers and equestrians; motorized and mechanized use is prohibited.

The County of Los Angeles has adopted trails plans for the Santa Clarita and Antelope Valley areas that include connections to Forest Service trails located north of Castaic Lake. Sections of these Forest Service trails cross through the Fish Canyon IRA and connect to the Pacific Crest Trail.

San Diego County has also adopted general alignments for a regional trail system. These alignments include the California Riding and Hiking Trail, the Trans County Trail (also proposed as the Sea to Sea Trail), and the San Diego River Park Regional Trail. As general alignments, not all trail segments are complete or designated. The portions of the trails that cross the Cleveland National Forest have not been designated or studied in any detail. Based on the alignments available through [SanGIS](#), the California Riding and Hiking Trail alignment crosses through portions of the Caliente IRA, the Trans County Trail crosses the Eagle Peak and Sill Hill IRAs, and the San Diego River Park Regional Trail is located to the west of Eagle Peak.

## **Motorized Trails**

Motorized trails are maintained for use by Off-Highway Vehicles (OHV). As described in the FEIS on page 283, the four forests do not provide all forms of OHV recreation but concentrate on narrow-width trail and four-wheel drive (4WD) opportunities that provide a diversity of challenges of the type that are found in remote, forested landscapes. Recent estimates of this activity participation range are shown in the NVUM reports which are on file at Forest offices.

There are 118 miles of designated motorized trails within the planning area. All of the trails are located on the Los Padres National Forest, primarily in the Antimony, Sawmill Badlands, and Sespe-Frazier IRAs. The Sespe-Frazier IRA includes the Mutau/Hungry Valley developed OHV area identified in the FEIS on page 285. This area is adjacent to the Hungry Valley State Vehicular Recreation Area, and the trails in the area are linked to provide OHV opportunities across state and federal lands. Table 47 displays trail type and mileage for the motorized trails on the Los Padres National Forest.

**Table 47. Trail Type and Mileage on the Los Padres NF**

Forest/Motorized Trail Type	Motorized Trails (Miles)
<b>Los Padres</b>	
Four Wheel Drive	9.8
All Terrain Vehicle	50.8
Motorcycle	57.5
<b>Total</b>	<b>118.1</b>

An emphasis of the OHV program in the Los Padres LMP (Part 2, page 63 and 66) is to pursue development of an OHV trail in the Hungry Valley - Mutau and Mount Pinos Places that would link Ballinger Canyon to Hungry Valley, which would facilitate the closure of the Toad Springs trail in the Chumash Wilderness. Although a specific route has not been analyzed, the likely location would be in the Sawmill Badlands and Sespe-Frazier IRAs.

The Los Padres LMP (Part 2, page 63) also emphasizes the development of a parallel OHV trail from Hungry Valley to Gold Hill to reduce safety problems. While no specific route has been analyzed, the likely location would be in the Sespe-Frazier IRA.

### **Road and Trail Maintenance**

The four forests are funded for roads and trails capital improvement and maintenance. This funding covers the costs associated with travel management planning, inspections, road and trail maintenance, signing, and public education. Funding from both sources is declining. The four forests received approximately \$3,400,000 in fiscal year (FY) 2002 to maintain the 3,780 national forest-managed road miles (FEIS page 279), but funding in FY 2009 and 2012 was reduced to approximately \$2,500,000.

The four forests also receive funding from the State of California OHV grant program for planning, operations, maintenance, restoration, and law enforcement associated with OHV use. The grants are awarded on a competitive basis and funding levels change from year to year depending on the grants requested and approved. Funding levels have dropped over the last three grant cycles, with \$26,000,000 available statewide in 2010, \$21,000,000 available in 2011, and \$10,000,000 available for the 2012 grant cycle (Stewart, 2012).

Volunteers play an important role by donating time to work on trails, trail heads, and staging areas. These volunteer services cover a wide range of work, including maintenance, resource protection, signing, and patrol. Services are donated by individuals as well as user clubs and other non-governmental organizations.

### **Commodity and Commercial Uses** \_\_\_\_\_

#### **Livestock Grazing**

Grazing on southern California NFS lands has been reduced by mandated decreases in livestock numbers to coincide with the capability of the national forest, as well as more recent influences including: increased labor costs; increased suppression of wildland fires; increased recreation use; increased reservoir construction; increased protection of threatened and endangered species

and heritage resources; and increased urbanization, industrialization and intensification of farming on adjacent and intermingled private ranch lands. The ranches adjacent to and in some cases within the national forests contribute to open space and the rural and rustic heritage of the four forests. There are benefits to wildlife and equestrian users of the national forests through the maintenance of water developments, roads, and trails by livestock grazing permit holders.

All livestock grazing is administered through grazing permits or special-use authorizations that are authorized through project specific NEPA analysis. Grazing allotments (also defined here as livestock grazing areas) are categorized into three types: allotments, special use livestock areas, and administrative pastures. Allotments are generally referred to as grazing areas designated for commercial livestock operations with, in most cases, intermixed private lands. Special-use livestock areas are designated on small areas adjacent to private land. Administrative pastures are areas set aside for use by Forest Service horses and pack stock. Table 48 displays the acres within grazing areas, by national forest. Grazing land acres on private land outside the national forest boundaries are not shown.

**Table 48. Acres within Livestock Grazing Areas by Forest**

Acres	Angeles	Cleveland	Los Padres	San Bernardino
Total Acres*	693,667	567,372	1,964,440	818,999
Total Grazing Area Acres*	8	161,746	880,217	206,192
Total NFS Grazing Area Acres	8	126,696	762,678	184,925

\*Includes private land intermixed within the NFS boundaries.

There are 186 livestock grazing areas and two wild horse and burro territories within the four southern California national forests (Table 49). Of the 186 livestock grazing areas, there are 137 allotments, 19 livestock areas, 30 administrative pastures and two wild horse and burro territories administered by the national forests. Wild horses and burros are managed on the national forests under the Wild Horse and Burro Act of 1971. The Mountaintop Ranger District of the San Bernardino National Forest manages a wild burro territory for 50 to 60 burros and the Santa Lucia Ranger District of the Los Padres National Forest manages the Black Mountain Wild Horse Territory for 20 horses. There has been a reduction of 11 livestock grazing areas since 2006 on the four southern California national forests due to closures.

Table 50 displays the 22 IRAs, by forest, with livestock areas within the planning area. Table 51 displays the number of IRAs in this evaluation by forest with livestock grazing areas, total number of livestock areas in IRAs, total IRA acres, and total grazing acres in the IRAs.

**Table 49. Number of Grazing Areas by Forest**

National Forest	Allotments	Livestock Areas	Administrative Pastures	Wildhorse & Burro Territories	Totals
Angeles	0	1	0	0	1
Cleveland	26	5	0	0	31
Los Padres	97	8	24	1	130
San Bernardino	14	5	6	1	26
Totals	137	19	30	2	188

**Table 50. IRAs with Livestock Grazing Areas**

National Forest	Inventoried Roadless Areas (20)
Angeles (0)	Sespe Frazier; The Piru (55) allotment is administered by the Los Padres NF.*
Cleveland (5)	Barker Valley, Eagle Peak, No Name, Sill Hill, Upper San Diego River Gorge.
Los Padres (13)	Antimony, Black Mountain, Cuyama, Diablo, Fox Mountain, Garcia Mountain, Machesna Mountain, Madulce Buckhorn, Quatal, Sawmill Badlands, Sespe Frazier, Spoor Canyon, White Ledge.
San Bernardino (2)	Cucamonga B, Pyramid Peak A.
*Sespe Frazier IRA is located on the Angeles and Los Padres NF.	

**Table 51. Livestock Grazing Areas by Forest, IRA, and Livestock Grazing within IRAs**

	Angeles	Cleveland	Los Padres	San Bernardino	Total
Total IRAs with Livestock Grazing	1	5	15	2	22
Total Livestock Grazing Areas in IRAs	1	8	43	2	54
Total IRA Acres	70,207	83,540	419,582	49,696	623,025
Total Grazing Acres in IRAs	103	4,166	206,282	14,410	224,960

Range improvements such as: roads, water/spring developments, ponds, fences, corrals, livestock handling facilities, etc. are associated with livestock grazing areas. These improvements are permitted and authorized in national forests. These improvements can be found in some wilderness areas, wild and scenic river designated areas, and in some special interest areas.

Traditional concepts of range condition and trend are not applicable to California annual grasslands. Variations in precipitation and temperature cause far more variation in species composition and production than does grazing. Productivity fluctuates from the driest to wettest years by more than 400 percent (Bently and Talbot, 1951). The Mediterranean climate in southern California (with its cool, moist winters and warm, dry summers) has resulted in a stable herbaceous plant community intermixed with oaks and chaparral that is largely comprised of annual vegetation species. These areas are productive and relatively easy to manage for a variety of resource outputs including livestock grazing (George and others 2001).

Long-established annual grassland management practices have been verified by range research and detailed in the current Forest Service Region 5 Range Analysis Handbook (USDA Forest Service 2001). Rangeland management for sustainability is achieved by maintaining moderate utilization levels that maintain forage, cover and habitat requirements for wildlife; and maintain soil productivity, water quality and ecosystem health. Moderate use is defined as leaving adequate residual dry matter (RDM), acting as mulch, that provides favorable microenvironments for early seedling growth, soil protection, adequate soil organic matter and a source of low-moisture fall forage for livestock (Bartolome and others, 1980). Many allotments

incorporate units or pastures to control the distribution of livestock, season of use, and help ensure protection of sensitive resources including riparian areas.

Rangeland management in the national forests includes but is not limited to: regulating livestock numbers and distribution; the season and degree of use; the placement of structural improvements; seasonal and permanent exclusions; and salt placement locations. Livestock grazing can occur year-round in grasslands, openings in chaparral and scrub, and within foothill savannas. It is important to note that authorized and actual use differs from the permitted numbers in response to annual fluctuations in weather and forage production. During drought cycles, many grazing areas are placed in full or partial non-use due to the lack of sufficient forage quantity and/or quality, and for resource protection.

The four forests continue to support viable livestock operations as one of the multiple uses on the national forests. However, a moderate decline in active grazing areas is expected to occur. This is likely to be a result of continued private land development, rising property values, and a reduction in livestock grazing suitable acres. The reduction in suitable acres is driven by the need for increased protection of recreation values, threatened and endangered species, heritage resources, other resource values, and increased urban development in and around the four forests. Consequently, some grazing areas will no longer support viable operations. In rural communities surrounding the national forests, the current level of use is expected to continue through the planning period.

## **Minerals and Energy**

The Forest Service supports the goals of the Multiple Use Sustained Yield Act and the National Energy Plan to supply resources for minerals and energy development, where it can be demonstrated, after environmental analysis that development can be done in an environmentally sound manner.

The number of unpatented claims on NFS lands changes from year to year. Mining claims are approximately 20 to 160 acres in size; ownership may include more than one person. Claims are typically owned by individual prospectors or mining companies. Unpatented claims with prior existing rights may still operate within areas of mineral withdrawal, subject to environmental restrictions. At present, there are less than half a dozen approved plans of operation for gold mining on the four forests. Most of these are small-scale operations that are active on weekends.

Energy minerals (primarily oil and gas) have been important products from the Los Padres National Forest for more than 100 years. Oil and gas production is expected to continue and slightly increase on the Los Padres National Forest and could be expanded onto the Angeles National Forest (depending on demand and political climate).

Renewable energy resources (primarily solar, wind and hydroelectric) have mostly been developed on non-Forest lands; however, the potential exists (as energy demands increase) to consider development of these resources on public lands after appropriate environmental analysis.

## **Minerals Management**

The federal government's policy for mineral resource management (as expressed in the Mining and Minerals Policy Act of 1970) states: "...foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic

development of domestic resources to help assure satisfaction of industrial, security, and environmental needs."

The Forest Service's responsibility to protect resources requires compliance with other laws and regulations, including applicable State of California laws. California signed into law Senate Bill 670 in 2009, stating that "the use of any vacuum or suction dredge equipment in any river, stream, or lake of this state is prohibited" until the director of the California Department of Fish and Wildlife certifies to the Secretary of State that the Department has completed a court-ordered environmental review of its existing suction dredge mining regulations, new regulations are adopted and those regulations are operative. California signed into law Assembly Bill 120 in 2011 which extended the moratorium through June 2016.

In many instances, mining activities including "high banking" require one or more permits from the State Water Resources Control Board (State Water Board) or appropriate Regional Water Quality Control Board (Regional Water Board). Various federal and state law requirements necessitate permitting and notification of mining activities as they affect the waters of the state of California. The federal Clean Water Act was enacted by Congress "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a)). Section 301 of the Clean Water Act prohibits "the discharge of any pollutant by any person" except in compliance with the Clean Water Act; i.e., except without obtaining a permit (33 U.S.C. § 1311(a)). The "discharge of any pollutant" means any addition of any pollutant to navigable waters from any point source. As defined by the Clean Water Act, "pollutants" include numerous metals and toxic substances (e.g. mercury) as well as dredged spoil, rock, sand, and earthen materials (33 U.S.C. § 1362(6)). The EPA has delegated authority of enforcing the Clean Water Act to the California State Water Board and the Regional Water Quality Control Boards (Regional Water Boards).

High-banking and power sluicing to recover gold is allowed in California provided that pre-determined conditions are met.

### **Withdrawals**

Unless withdrawn from mineral entry or otherwise restricted by forest orders or closures, National Forest System lands are open to location and mineral claiming under the General Mining Law of 1872 (as amended) and the Mineral Leasing Act of 1920. Withdrawals do not guarantee that mining will not occur because National Forest System lands are subject to valid existing rights at the time of a withdrawal. The forest plan revision process does not take away valid existing rights. Wilderness is withdrawn from mineral entry, therefore, no mining, leasing, nor drilling may occur within wilderness boundaries except in those few areas with prior existing rights.

### **Locatable Minerals**

Locatable minerals include rare and uncommon mineral types such as gold, silver, copper, lead and zinc, and some varieties of stone, pumice and cinder deposits that have distinct and special properties making them commercially valuable for use in manufacturing, industrial or processing operations.

State regulations related to prospecting for gold in streams have changed since the 2006 LMP due to changes related to the suction dredge ban and the permitting rules for "high banking" and power sluicing.



## **Leasable Minerals**

The 1920 Mineral Leasing Act (as amended) and the 1970 Geothermal Steam Act govern leasable minerals which include oil, gas, phosphates and geothermal resources. The law provides for the leasing of the public mineral estate by a prospector or a corporation, provided that the lands are open for mineral leasing and not reserved or withdrawn for other purposes.

The only leasable minerals presently leased on the four forests are oil and gas on the Los Padres National Forest. There are 22 oil and gas leases on 15,000 acres, which contain about 180 wells and associated facilities. The Sespe, Upper Ojai and Cuyama oil fields are historical and currently active producers of more than 500,000 barrels of oil per year. According to the 2005 FEIS for Oil and Gas for the Los Padres National Forest, the Sespe Oil Field and Ojai areas have 96 percent of the wells and the South Cuyama Oil Field has 4 percent. The Oil and Gas FEIS also identifies approximately 140,000 acres characterized forest-wide as high potential for oil and gas occurrence that have not yet been developed. The Oil and Gas FEIS re-evaluated existing leases. When leases expire and where adverse impacts cannot be mitigated, those leases will not be renewed.

The decision made in the 2005 Oil and Gas FEIS for the Los Padres National Forest makes portions of the Sespe, San Cayetano, and South Cuyama High Oil and Gas Potential Areas (HOGPAs) available for oil and gas leasing, and it authorizes Bureau of Land Management (BLM) to lease certain lands in these HOGPAs in accordance with identified stipulations. The remainder of the HOGPAs studied and the non-HOGPA area would not be available for leasing.

The South Cuyama HOGPA encompasses portions of the Fox Mountain IRA, the Spoor Canyon IRA, the Cuyama IRA, and the Sawmill-Badlands IRA. The San Cayetano HOGPA encompasses portions of the Sespe-Frazier IRA. In each case, the portions of the IRAs available for lease have a 'No Surface Occupancy' restriction.

## **Saleable Minerals (also called Mineral Materials or Common Variety Minerals)**

This class of minerals includes petrified wood and common varieties of sand, gravel, stone, pumice, pumicite, cinders, clay and other similar materials used primarily for agriculture, animal husbandry, building, abrasion, construction, landscaping and similar uses. Disposal of these minerals to the public may be made by sale or free-use permit, or by special agreement to government entities, as governed by the 1947 Mineral Materials Act and other laws.

## **Renewable Energy Resources (Wind, Solar, Hydroelectric)**

The Energy Policy Act of 2005 recognizes the Forest Service's role in meeting the renewable energy goals of the United States. Consistent with agency policies and procedures, the use and occupancy of NFS lands for alternative energy production, such as wind energy development, are appropriate and will help meet the energy needs of the United States. The directives provide consistent guidance and adequate analyses for evaluating wind energy proposals and applications for issuing wind energy permits.

The Forest Service Strategic Energy Framework (January 2011) sets direction and proactive goals for the agency to significantly and sustainably contribute toward resolving U.S. energy resource challenges, by fostering sustainable management and use of forest and grassland energy resources.

## **Wind Energy**

Forest Service direction for wind energy was amended in 2011 (see FSH 2709.11 – Special uses Management; Chapter 70 – Wind Energy Uses). Additional direction for wind energy can be found in FSM 2726.02a – Wind Energy Facilities- and FSM 2726.21c – Ancillary Facilities.

There are two types of permits for wind energy uses: site testing and feasibility permits and permits for construction and operation of a wind energy facility. Permit information includes:

- Site testing and feasibility permits are issued for the installation, operation, and removal of meteorological towers or other instruments to gather data regarding the wind resource and to determine the feasibility of producing wind energy. A site testing and feasibility permit may be issued for up to five years. There are two types of site testing and feasibility permits: minimum area permits and project area permits (section 75.1).
- Construction and operation permits are issued for the construction, operation, and removal of a wind energy facility. Proponents must establish the feasibility of successfully producing wind energy within a proposed project area before they may be issued a construction and operation permit for that area. The feasibility of a project is usually established through the analysis of data collected during the tenure of a site testing and feasibility permit. A permit for construction and operation of a wind energy facility may be issued for up to 30 years (section 75.2).

## **Wind and Solar Energy**

FSM and FSH direction were updated in 2011 to include specific direction for Energy Generation and Transmission (see FSM 2700, Chapter 2720 and FSH 2709.11). Information concerning solar energy power facilities can be found in FSM 2726.23. These facilities generally are not dependent upon NFS lands and permits are issued under this designation only if non-NFS lands are not available and if adverse impacts can be minimized.

## **Non-Recreation Special Uses**

Special use authorizations allow occupancy, use, or rights and privileges on National Forest System land by federal, state and local agencies, private industry, and individuals. Special use authorizations may include permits, leases or easements. These legal documents are signed by both the permit holder and the Forest Service's Authorized Officer. They provide descriptions and locations of the facilities, terms and conditions for public safety and resource protection, and responsibilities and rights of both the permit holder and the Forest Service. The authorizations within IRAs vary substantially as to their age, which authorities they were granted under, how routinely they are inspected, fees charged for the uses, and the specific terms and conditions. Non-recreation special uses vary from low-intensity, often short-term actions such as filming or locations for scientific instruments, to major developed facilities such as radio and television transmission sites, oil and gas pipelines, dams and high voltage electrical transmission lines. Authorizations for grazing, minerals, and timber are not considered special uses and are authorized under separate programs and authorities.

The description of each IRA in Appendix 2 includes details on authorized facilities, including some of which are nearby or adjacent to the IRAs. Only non-recreation special uses that are within the IRAs are discussed in this section.

Different mapping methods at the time the IRAs were established, compared to today's more precise geographic information systems, are the primary reason many authorizations are identified as occurring within the IRAs. A majority of the uses existed at the time the IRAs were designated. The authorized facilities occur primarily around the edges of the IRA boundary and are not substantially within the interior of the IRAs with exceptions noted below by forest.

#### *Angeles National Forest*

Authorizations include oil and gas pipelines, electrical transmission lines, fiber-optic lines, roads, water pipelines, communication sites, and a support site for a major flood control reservoir. All of these facilities occur just within the edge of IRA boundaries with two exceptions. The Tule IRA contains approximately 36 acres of right-of-way for the Los Angeles DWP Aqueduct, a buried water pipeline. The West Fork IRA contains approximately 60 acres of a designated sediment disposal site to support Cogswell Dam and Reservoir, owned and operated by the Los Angeles County Department of Public Works Flood Control Division. The Fish Canyon IRA and the Angeles National Forest managed portion of the Sespe-Frazier IRA do not contain any non-recreation special use authorizations.

Portions of two designated utility corridors established in the LMP occur within IRAs on the Angeles National Forest. These are designated as the preferred locations for future utility projects. Approximately 30 acres of the Interstate-5 transportation corridor are within the western portion of the Salt Creek IRA and approximately 11 acres of the Rio Hondo – Vincent transmission line corridor are within the West Fork IRA.

#### *Cleveland National Forest*

Authorizations include a communication site, roads, electrical lines, and a military training area. All authorized facilities occur just within the edge of IRA boundaries with several exceptions. The Valley-Serrano transmission line crosses the Coldwater IRA (31 acres) and the Ladd IRA (37 acres). The Barker Valley IRA contains approximately 3,000 acres of a permitted military training area. San Diego Gas & Electric transmission and distribution lines and associated access roads cross the Cedar Creek, Upper San Diego, Sill Hill and No Name IRAs. The Caliente and Eagle Peak IRAs do not contain any non-recreation special use authorizations.

The Valley Serrano Utility Corridor, containing the Valley-Serrano transmission line, is a quarter mile wide and crosses the Coldwater (256 acres) and Ladd (304 acres) IRAs. This corridor is designated as the preferred location for future utility projects in the LMP. It is also designated as a corridor in the *2008 Programmatic Environmental Impact Statement for Designation of Energy Corridors on Federal Land in the 11 Western States*, known as the Westwide Energy Corridor Study. This study and the associated designations were required by the 2005 Energy Policy Act.

#### *Los Padres National Forest*

The Los Padres National Forest has the most IRAs as well as the most IRA acreage of the four forests. It also has the most special use authorizations within IRAs, and the greatest acreage of permitted area of those four forests. Of the 16 IRAs on the Los Padres National Forest, only two, Juncal and Diablo, have no non-recreation special use authorizations. Authorizations within IRAs on the Los Padres cover almost the entire variety of Forest Service non-recreation special uses. Authorized uses include apiaries, weather stations, seismic monitoring, communication sites, oil and gas pipelines, water delivery systems, electrical and telephone lines, and roads.

The mileage of special use authorizations for roads within IRAs on the Los Padres National Forest is greater than the other three forests combined (see Table 44 in the Transportation section).

As with the other southern California national forests, a majority of the authorizations within the Los Padres National Forest IRAs are along the edges and are probably a result of mapping inaccuracies. However, many of the authorized facilities, particularly roads and water lines, extend farther into the interior of the IRAs. Fox Mountain, Sawmill Badlands, Sespe Frazier, and Tequepis IRAs all contain water systems that typically run from springs within the IRA to nearby private ranches or communities. Fox Mountain and Sespe Frazier contain communication sites within interior areas, along with associated access roads and electrical lines. There are no designated utility corridors within IRAs on the Los Padres National Forest.

#### *San Bernardino National Forest*

Authorizations within the San Bernardino National Forest IRAs include roads, water sources and pipelines, a small diversion dam, a powerline, a permitted area for the Mt. Baldy Ski Resort, and the Federal Energy Regulatory Commission (FERC) San Gorgonio hydropower site. The roads are mainly around the boundaries and edges of the Raywood B IRA and primarily serve as access roads to private inholdings. The ski resort permitted area is also on the edge of the Cucamonga B IRA, and includes a water pond and access road (on approximately 2 acres). There are approximately 150 acres associated with the San Gorgonio FERC site within the Raywood B IRA. The Pyramid Peak A IRA contains no special use authorizations and the Cucamonga C IRA contains 0.15 acres of authorized water delivery facilities. There are approximately 28 acres for a water system, serving the community of Pinyon Pines, within the Cactus Springs B IRA. No designated utility corridors are within IRAs on the San Bernardino National Forest.

## **Lands and Real Estate Management Activities** \_\_\_\_\_

### **Private Lands**

As described on page 303 in the FEIS, about 87% of the area within the boundaries of the four southern California national forests is National Forest System (NFS) lands. The remaining 13% is either owned by state or local government or privately owned. The LMP direction only applies to the NFS lands.

Inventoried Roadless Area designations also apply only to NFS lands. As a consequence, the designation of IRAs excluded the private land within their boundaries. Mapping the IRAs in this fashion created a few situations where private land was surrounded by inventoried roadless area. The IRA analysis (Appendix 2) provides more detail on the land ownership for each IRA.

In summary, there are no private land parcels on the Angeles or Cleveland National Forests that are completely surrounded by inventoried roadless area. There are several parcels on the Cleveland National Forest that are essentially surrounded by roadless area except for narrow road corridors. Several large parcels are bounded on three sides by NFS lands in the Upper San Diego River undeveloped area, and one route of access to that private land parcel is across NFS lands, although no permit has been issued for this use.

There is one parcel of private land within the Machesna Mountain IRA and several parcels of private land within the Sespe-Frazier IRA on the Los Padres National Forest that are surrounded by inventoried roadless area. The Sespe-Frazier parcels have road access across inventoried roadless area lands.

The San Bernardino National Forest has several undeveloped parcels in the Cucamonga B IRA. The Pyramid Peak A and Raywood Flat B IRAs have a checkerboard pattern of land ownership that includes several sections of undeveloped private land within each IRA.

There are parcels of private inholdings adjacent to almost all the IRAs. County general plans described later in this chapter govern the activity on private land, and the consistency of the LMP direction with those general plans is evaluated in the environmental consequences section in Chapter 4.

## **Wildland Fire and Community Protection**\_\_\_\_\_

### **Fire History**

The planning area is located within one of the most dangerous wildland fire environments in the United States. As described on pages 306 to 312 in the FEIS, wildfires burn an average of 57,100 acres a year on the four southern California national forests. Eighty-four percent of the fires are human-caused; the rest are caused by lightning. Most are controlled at 100 acres or less. As noted in the comments to the Draft SEIS, those fires not controlled at 100 acres or less can rapidly grow quite large.

Based on a review of the interagency fire perimeter data base, 410 wildfires over 10 acres in size occurred within the planning area during the period of record from 1898 to 2011. Average fire size of these larger fires was approximately 10,500 acres. Since 2006, 24 wildfires over ten acres that have occurred within the planning area, including the Day (2006), Ranch (2007), Witch (2007), Zaca (2007), La Brea (2009), and Station (2009) fires. Since the publication of the Draft SEIS, several fires have occurred within portions of the IRAs. The 4,300 acre Grand Fire burned in portions of the Sespe-Frazier IRA in May, 2013. The 30,000 acre Powerhouse Fire burned in the Tule, Red Mountain, and Fish Canyon IRAs and the 3,800 acre Hathaway Fire burned in portions of the Raywood Flat IRA during early June 2013. The 27,000 acre Mountain Fire burned in portions of the Pyramid Peak A IRA in July 2013.

Given the extensive fire history, there are locations within the planning area that have experienced multiple overlapping fires over the period of record. These areas are summarized in Table 52. While most of these areas are small, there are two locations that have experienced frequent widespread fires. On the Cleveland National Forest, the San Diego River Canyon area has experienced several major fires including an unnamed fire in 1928, the Inaja fire in 1956, the Eagle fire in 1993, the Cedar fire in 2003, and the Witch fire in 2007. On the Los Padres National Forest, portions of the White Ledge IRA have burned multiple times, starting with the Los Padres fire in 1898, the Thacher fire in 1917, the Matilija fires of 1932 and 1983, the Wheeler #2 fire in 1985, and the Los Padres fire in 1990. Portions of the Sespe-Frazier IRA burned in unnamed fires in 1917 and 1937, the Hopper fire in 1997, the Piru fire in 2003, and the Ranch fire in 2007.

**Table 52. Areas with more than four Fires over ten Acres\***

<b>IRAs by Forest</b>	<b>Acres within IRA for Areas with more than 4 fires</b>
<b>Angeles</b>	
Fish Canyon	5.0
Red Mountain	1.2
Sespe – Frazier	43.2
West Fork	3.7
Westfork	348.8
<b>Cleveland</b>	
Cedar Creek	73.4
Adjacent to Eagle Peak and Upper San Diego	580.6
Coldwater	20.2
Eagle Peak	2,644.4
No Name	18.9
Upper San Diego River	2,155.9
<b>Los Padres</b>	
Black Mountain	345.5
Dry Lakes	556.3
Juncal	313.9
Sespe – Frazier	1,534.5
Spoor Canyon	12.1
White Ledge	2,067.1
<b>San Bernardino</b>	
Cucamonga B	424.5

\*Fires documented during the period of record: 1898-2011.

### **Wildland/Urban Interface**

As described in the FEIS, fires originating on National Forest System land pose an imminent threat to communities within and along the periphery of each southern California national forest. Even fires that start in relatively remote areas can threaten communities within the first 24 hours of ignition.

Most of the lands within the four forests are considered part of the Wildland/Urban Interface (WUI) environment. The WUI is defined as the area where dense development meets the wildlands. Almost half of the planning area is located in WUI, including portions of all 37 IRAs within the planning area.

The LMP further defines the WUI to include a direct protection buffer (WUI Defense Zone) and an indirect protection buffer (WUI Threat Zone) (see standard S7 in LMP Part 3). A WUI Defense Zone is the area directly adjoining structures and evacuation routes that is converted to a less-flammable state to increase defensible space and firefighter safety. The WUI Threat Zone is an additional strip of vegetation modified to reduce flame heights and radiant heat. The Threat Zone generally extends approximately 1.25 miles out from the Defense Zone boundary. Actual

extents of Threat Zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire and community protection plans, and therefore can extend well beyond 1.25 miles. The two zones together are designed to make most structures more defensible.

Community protection needs within the WUI Defense Zone take precedence over the requirements of other forest plan direction, including other standards identified in Part 3 (See Standard S8 in LMP Part 3). The WUI Defense Zone is not a mapped land use zone allocation, but it is refined and used during project planning. If expansion beyond the 300-foot minimum width of the defense zone is needed due to site-specific conditions, projects will be designed to mitigate effects to other resources to the extent possible.

### **Suppression Effectiveness and Firefighter Access**

All fires are aggressively suppressed on the four southern California national forests. Resources respond from multiple agencies and fires often operate under unified command. The Forest Service has interagency agreements with the various agencies that describe how suppression resources are mobilized in support of incidents. These agreements are described in greater detail in the California Mobilization Guide (published annually).

Suppression strategies and tactics are based on a number of factors, including firefighter and public safety, values at risk, and LMP direction. Wildfires occurring since 2006 have been managed under the requirements of the current LMP. The 24 wildfires over 10 acres that have been suppressed under the current LMP have approximately 116 miles of control lines that were established in the planning area.

Under the current LMP there are no restrictions on fire suppression activities by land use zone. Minimum Impact Suppression Tactics (MIST) are emphasized in all wilderness areas (See LMP Part 3, Appendix B). Use of MIST takes into account the overall incident objectives when determining the most effective suppression approach to use in Wilderness while having the least impact on wilderness character. If, after the application of the MIST analysis, motorized or mechanized equipment is needed to halt fire spread and contain it within the fireline, Forest Supervisors meeting established training requirements may approve (under delegated authority from the Regional Forester) the use of mechanized equipment other than bulldozers (such as chain saws, pumps, helicopters) in existing wilderness. Use of bulldozers requires Regional Forester approval. The approval process has been streamlined so that timely decisions can be made consistent with fire suppression needs. Fire suppression actions in wilderness are consistent with the provisions in subsection 4(d) (1) of the 1964 Wilderness Act which allows actions necessary to control fires.

As described in the FEIS, fuel breaks, roads, and past burns have been an effective combination in helping limit wildland fire size. Recent studies by the Southern California Wildfire Risk Scenario Project have shown that factors that improve the outcome of fuel breaks are firefighter access, fire size, and fuelbreak condition (Syphard et al 2011). Firefighter access is the most influential variable. However, just as wildfire is dependent on fuels, weather and topography, fuelbreak effectiveness is influenced by a number of different variables. Firefighter access is the one variable that is affected by the proposed changes in LUZs, and access to fuelbreaks can be used as an indicator in the effects analysis. It is important to recognize that other variables may override access during a specific fire, so that even fuelbreaks supported by roads may not always

be effective under extreme fire conditions. Many fire control locations are accessed by using NFS roads. Table 44 in the transportation section summarizes the miles of system roads within the planning area.

Table 53 summarizes the miles of inventoried fuel breaks (USGS 2011) within the planning area by land use zone.

**Table 53. Summary of Miles of Fuel Breaks by Forest within the Planning area**

	Miles of existing fuelbreaks by Land Use Zone (LUZ)*						
	BC	BCMUR	BCNM	DAI	EW	RW	Total
<b>Angeles</b>	1.6	0.5	17.6	2.9			22.7
<b>Cleveland</b>	6.8		0.8	0.0			7.6
<b>Los Padres</b>	13.8	8.9	8.1	2.5	0.1	0.9	34.3
<b>San Bernardino</b>	1.9	1.0	2.3	0.7			6.0
<b>Total</b>	24.2	10.4	28.7	6.2	0.1	0.9	70.5

\*BC= Backcountry, BCMUR= Backcountry Motorized Use Restricted, BCNM= Backcountry Non-Motorized, DAI=Developed Area Interface, EW=Existing Wilderness, RW= Recommended Wilderness.

## National Forest Management

The four southern California national forests are funded and managed to meet the multiple use mandate of the National Forest Management Act (NFMA) and Multiple Use Sustained Yield Act (MUSYA). The congressionally appropriated funding that the Forests receive has specific accomplishments associated with it that is apportioned to the Forests as annual targets. This annual fiscal cycle of funding dictates the management actions that each Forest takes to achieve the desired conditions with the Forest Plans.

Since the forest plans were revised in 2006, on average the ANF has received \$8,525,235, the CNF \$5,511,726, the LPNF \$6,554,853, and the SBNF \$18,715,027 in non-fire appropriated funding annually (Table 54). There have been fluctuations in funding year to year with an increase up to 2009 and then a decrease since. The high points in 2008 and 2009 reflect additional funding for hazardous fuels reduction due to high vegetation mortality on the ANF and SBNF and the American Recovery and Reinvestment Act of 2009. Over the seven year period 471 decisions have been made to implement the Forest Plans.



**Table 54. Appropriated Funding by Forest - FY 2006-2013**

Fiscal Year	Angeles	Cleveland	Los Padres	San Bernardino	Total
<b>2006</b>	8,271,893	2,930,701	6,532,837	19,826,310	<b>37,561,741</b>
<b>2007</b>	6,344,165	3,678,173	5,648,496	18,896,779	<b>34,567,613</b>
<b>2008</b>	13,871,875	7,989,412	6,827,840	43,351,743	<b>72,040,870</b>
<b>2009</b>	12,288,835	11,220,923	9,910,559	38,498,292	<b>71,918,609</b>
<b>2010</b>	7,474,261	4,725,000	6,510,095	9,083,863	<b>27,793,219</b>
<b>2011</b>	7,945,186	5,321,500	5,995,174	7,421,025	<b>26,682,885</b>
<b>2012</b>	6,682,661	4,704,097	6,572,826	6,916,206	<b>24,875,790</b>
<b>2013</b>	5,323,000	3,524,000	4,441,000	5,726,000	<b>19,014,000</b>
<b>Total</b>	<b>\$68,201,876</b>	<b>\$44,093,806</b>	<b>\$52,438,827</b>	<b>\$149,720,218</b>	<b>\$314,454,727</b>
<i>Average/yr</i>	<i>\$8,525,235</i>	<i>\$5,511,726</i>	<i>\$6,554,853</i>	<i>\$18,715,027</i>	

Forest plan monitoring is funded under a mix of appropriated dollars. The average funding for forest plan monitoring over the seven year period since the plans were revised in 2006 has been approximately \$40,000 per forest per fiscal year.

## Other Plans

There are several plans at the federal, state, and local level that include National Forest System lands within their assessments, goals, and objectives. This section of the SEIS will review those plans and their relationship to the IRAs being evaluated.

### Federal Plans

**Southern California Steelhead Recovery Plan (NMFS 2012).** The Final Southern California Steelhead Recovery Plan was released by the National Marine Fisheries Service (NMFS) in January 2012 ([Recovery Plan Index Page](#)). The goal of the plan is to prevent the extinction of southern California steelhead in the wild and to ensure the long term persistence of a viable, self-sustaining population. The plan includes a goal of reestablishing a sustainable steelhead sport fishery. A Public Draft South-Central California Coast Steelhead Recovery Plan (October 2012) is also available on the web at the [Recovery of Salmon & Steelhead in California and Southern Oregon index page](#).

The portions of the IRAs being considered in this SEIS that are located within costal draining watersheds are within the recovery planning area. While most IRAs are located in the headwater regions, several IRAs include designated critical habitat (refer to the biology section for more detail). Recovery actions related to the national forest include habitat restoration work on steelhead streams and implementing watershed management practices that protect water quality and downstream habitat.

Other recovery plans for species that are known to occur within IRAs covered under this SEIS are: Santa Ana sucker (2012); Vernal Pool Ecosystems of California and southern Oregon (2006); Quino checkerspot butterfly (2003); Southwestern willow flycatcher (2002); Peninsular bighorn sheep (2000); Six Plants from the Mountains Surrounding the Los Angeles Basin (1999); Arroyo toad (1999); and San Bernardino Mountains Carbonate Plants (1997).

## State Plans

**California Forest and Rangelands Strategy Report (CALFIRE 2010).** The California Forest and Rangelands Strategy Report was developed in response to requirements of the 2008 Farm Bill, and is based upon the findings from the supporting 2010 Forests and Rangelands Assessment Report.

The Strategy Report outlines strategies that address each of the priority issues and landscapes that were identified in the 2010 Forests and Rangelands Assessment Report. The assessment is organized around three broad national themes that were identified in the redesign of State and Private Forestry programs: 1) conserve working forest and range landscapes; 2) protect forest and rangelands from harm; and 3) enhance public benefits from trees, forests and rangelands. Following the assessment framework the strategies report was then organized around 11 priority sub-themes that are presented as separate chapters in the assessment report.

**California Water Plan Update 2009 (DWR 2009).** Updated every five years by the Department of Water Resources, the California Water Plan provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. Volume 2 presents a diverse set of resource management strategies to meet the water-related resource management needs of each region and of the state as a whole. Chapter 23 outlines the water plan strategy for forest management, which includes the National Forests. The strategy includes maintaining and protecting water quality and water quantity from forested lands.

**California Wildlife Conservation Challenges, California's Wildlife Action Plan (CDF&G 2007).** California's Wildlife Action Plan was prepared in response to requirements of the federal State Wildlife Grants Program. The action plan identifies the species and habitats of greatest conservation need, the major stressors affecting California's native wildlife and habitats, and the actions needed to restore and conserve California's wildlife, thereby reducing the likelihood that more species will approach the condition of threatened or endangered.

The IRAs being evaluated in this analysis are located within the action plan's Central Coast and South Coast regions. Wildlife stressors in both regions include growth and development, degradation of aquatic systems, invasive species, altered fire regimes, and recreational pressures. The actions identified for each region include coordination between federal, state and local agencies to protect and restore relatively large un-fragmented habitat areas wildlife corridors, and under-protected ecological community types and protect sensitive species and important wildlife habitats on their lands. Federal, state, and local agencies should also work to restore fish passage in aquatic systems important for anadromous and wide-ranging fish populations.

## County Plans

Each of the nine counties within the planning area have General Plans that guide development of unincorporated lands within each county. Incorporated cities within the counties also have General Plans for lands within their jurisdiction. Each General Plan has zoning requirements as well as a land use element that are mapped for all lands. Although the county requirements do not apply to National Forest System lands, they would apply to private land inholdings and development on adjacent private lands. Table 55 displays the acres of each IRA by county. Some IRAs are located in multiple counties.

**Table 55. Acres of IRAs by County and Forest**

<b>Forest</b>	<b>County and IRA</b>	<b>Acres</b>
<b>Angeles</b>	<b>Los Angeles</b>	
	Fish Canyon	29,886
	Red Mountain	8,034
	Salt Creek	11,022
	Sespe - Frazier	4,254
	Tule	9,861
	West Fork	1,169
	Westfork	4,407
<b>Cleveland</b>	<b>Orange</b>	
	Coldwater	362
	Ladd	4,661
	Trabuco	22,517
	<b>Riverside</b>	
	Coldwater	8,039
	Ladd	640
	Trabuco	824
	<b>San Diego</b>	
	Barker Valley	11,940
	Caliente	5,953
	Cedar Creek	2,793
	Eagle Peak	6,481
	No Name	4,897
	Sill Hill	5,294
	Upper San Diego River	5,772
<b>Los Padres</b>	<b>Kern</b>	
	Antimony	40,844
	Quatal	720
	Sawmill - Badlands	4,310
	Sespe - Frazier	3,389
	<b>Los Angeles</b>	
	Sespe - Frazier	601
	<b>San Luis Obispo</b>	
	Black Mountain	16,818
	Garcia Mountain	7,850
	Machesna Mountain	12,271
	<b>Santa Barbara</b>	
	Cuyama	19,067
	Diablo	19,597
	Fox Mountain	52,072

Forest	County and IRA	Acres
	Juncal	11,835
	Madulce Buckhorn	11,586
	Spoor Canyon	13,762
	Tequepis	9,080
	White Ledge	6,054
	<b>Ventura</b>	
	Antimony	67
	Cuyama	564
	Dry Lakes	17,043
	Juncal	454
	Madulce Buckhorn	2,591
	Quatal	6,533
	Sawmill - Badlands	47,051
	Sespe - Frazier	102,920
	White Ledge	12,579
<b>San Bernardino</b>	<b>Riverside</b>	
	Cactus Springs B	3,106
	Pyramid Peak A	14,177
	Raywood Flat B	866
	<b>San Bernardino</b>	
	Cucamonga B	11,933
	Cucamonga C	4,106
	Raywood Flat B	10,508

Although the names of the zones and land use elements vary by county, for the majority of the IRAs the zoning and land use element is open space, agricultural, watershed, or conservation lands. Adjacent lands are similarly zoned for low density uses with a few exceptions as outlined below.

In Ventura County, a small portion of the Sespe-Frazier IRA is located adjacent to residential community in the Upper Ojai Valley. In Kern County, the Antimony and Sawmill IRAs are located adjacent to residential development in Pine Mountain, and a portion of the Sespe-Frazier is located adjacent to residential development in Lake of the Woods and Frazier Park. In San Bernardino County, the checkerboard ownership pattern of the Raywood Flat B IRA includes private land zoned for conservation but also includes residential development at Forest Falls and Oak Glen.

Within Riverside County, the Coldwater IRA is adjacent to very high density residential development within the Temescal Valley area, particularly near Glen Ivy Hot Springs. Within Orange County, the Trabuco IRA is adjacent to developments within the Foothill Specific Plan area and the city of Rancho Santa Margarita.

San Diego County is currently proposing a General Plan Amendment to the San Diego County General Plan, previously adopted on August 3, 2011. The project will include revision of the

existing General Plan land use designation on a number of private parcels totaling approximately 75,000 acres within the unincorporated areas of the County. These lands were previously known as “Forest Conservation Initiative” (FCI) lands and subject to a minimum lot size of 40 acres. When the FCI expired, the areas affected by the FCI reverted to the land use designations in effect before the FCI was enacted. The project will re-designate these lands to be consistent with the Guiding Principles and Policies of the adopted General Plan Update and involve an amendment to the County Zoning Ordinance to ensure that the zoning of the affected parcels is consistent with the proposed land use designations.

A final decision has not yet been made. At this time, the proposed zoning for the former FCI lands around the IRAs and undeveloped areas generally remains Rural Lands 40 acres (RL-40) or lower density Rural Lands 80 acres (RL- 80). There would still be potential for development of any legally acquired parcels smaller than this size, for example in the private lands between Upper San Diego River and Eagle Peak areas.

Multiple Species Habitat Conservation Plans (MSHCPs) have been written for each county covered in this SEIS. These MSHCPs provide additional direction on the conservation of habitats and monitoring of species of concern within each county. Each forest works in cooperation with their respective counties in the coordination and implementation of these plans. These plans are not affected by the Forest’s LMP.

As noted in the roads and trails section of this chapter, the County of Los Angeles Department of Parks and Recreation and San Diego County have adopted regional or county trails plans that include proposed trail alignments that cross the national forests.

## Monitoring

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The LMP consists of three interrelated parts that work together to facilitate the use of adaptive management and the development of management activities that will collectively move the national forests toward their desired outcome. Part 1 paints the picture of the vision and conditions desired in the long-term. Parts 2 and 3 contain, respectively, the strategic management direction and the guidance for designing actions and activities in order to make progress toward the vision and desired conditions described in Part 1.

Part 1 is the vision for the southern California national forests. It describes the national forests' uniqueness on a national and regional level. It describes the Forest Service's national goals, the roles and contributions that the national forests make (their niche), the desired conditions (36 CFR 219.11(b)) for the various landscapes within the national forests, and finally, the evaluation/monitoring indicators (36 CFR 219.11 (d)) that will be used to assess the progress made toward accomplishing the desired conditions. The Code of Federal Regulations (CFRs) provides the implementing regulations for laws.

Each of the desired condition is linked to evaluation/monitoring questions. These questions are designed to evaluate the indicators of progress over time towards the desired conditions (outcomes). These questions along with annual accomplishment indicators and implementation monitoring of design criteria constitute the land management monitoring plan (36 CFR 219.11(d) and 36 CFR 219.12(k)). This monitoring framework as well as the Alternative Monitoring strategies considered in the Amendment applies to all National Forest System lands on the four Southern California National forests, not just the Inventoried Roadless Areas under consideration in the Amendment.

Monitoring requirements are found in all three parts of the forest plans, and are summarized in Part 3, Appendix C of the Forest Plans. Monitoring relative to Part 1 of the LMP is focused on measuring movement toward desired conditions over the long-term. Monitoring associated with Part 2 of the LMP documents individual program accomplishments and is reported annually. Finally, monitoring for Part 3 of the LMP measures how well project implementation follows forest plan direction. An adaptive management approach designed to lead to continuous improvement in the national forests' environmental performance is common to all monitoring.

## **Part 1 Monitoring**

Monitoring and evaluation provide knowledge and information to keep the forest plan viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps the Forest Service determine if the desired conditions identified in the forest plan are being met. Monitoring and evaluation also help the Forest Service determine if there should be changes to goals and objectives, or monitoring methods.

Evaluation is more than reporting facts and figures. Forest plan evaluation tells how decisions have been implemented, how effective the implementation has proved to be in accomplishing desired conditions, what was learned along the way, and how valid management assumptions are that led to forest plan decisions. Monitoring and adaptive management should lead to improved implementation and resource conditions.

Adaptive management is the foundation for planning and management. The planning regulations require that forest plans be revised every 10-15 years after forest plan approval (36 CFR 219.10(g)). Forest plans need to be dynamic to account for changed resource conditions, such as large-scale wildland fire or listing of additional species under the Endangered Species Act; new information and science such as taking a systems approach, and new or modified regulations; and new or modified policies such as the Roads Analysis Policy.

Monitoring and evaluation are critical to adaptive management. Other component parts include inventory, assessment, planning, and implementation. No single component can be isolated from the whole of adaptive management.

Monitoring and evaluation processes begin by identifying key questions Forest Service managers need to answer about forest plan implementation. Understanding the questions help to identify information needs, data collection designs, and tools needed to turn data into information and knowledge. Managers must also have a clear understanding of baseline conditions (current resource condition at the time of signing the Record of Decision) versus desired conditions and the evaluation strategies that will help determine if movement towards desired conditions is occurring. Appropriate selection of indicators help assess resource status and trends, and progress towards meeting the desired conditions identified in the forest plan.

The aggregated outcome of project level work reflects progress towards achieving the desired conditions of the forest plan and the contribution to agencies' priorities. This emphasizes the importance of using the National Strategic Plan (2003 revision) desired conditions, goals and objectives that apply to the planning area in the forest plan and to use common criteria and indicators as appropriate in the forest plan. This approach will enable monitoring and evaluation efficiencies and provide critical information on the national forests' contribution to the agency's mission, goals, and objectives. Table 56 provides the Key Questions by resource area, the

indicator for that question, what monitoring action(s) will occur and the appropriate data to use, the reliability of the data, and cost.

The Forest Supervisor maintains monitoring information, including internet-based reports, for public reviews, and evaluates such information on a periodic basis to determine, among other things, need for amendment or revision of the forest plan. Formal evaluation and reporting occurs every five years, unless the Forest Supervisor decides a shorter timeframe is warranted for some evaluations. The five-year review provides a comprehensive evaluation of information in response to monitoring questions and regulatory review requirements.

**Table 56. Part 1 Monitoring Summary**

Goal	Monitoring Question	Indicators	Monitoring Action	Data Reliability	Report Period (Years)
1.1	Has the forest made progress in reducing the number of acres that are adjacent to development within Wildland Urban Interface (WUI) defense zones that are classified as high risk?	Fire Hazard/Risk	Use baseline acres from the 2006 Southern California Land Management Plans analysis; subtracting the areas treated, and areas that are no longer WUI Defense Zone; and adding acres from areas that have reverted to high hazard and risk due to maintenance backlog, and areas that have become WUI Defense Zone due to development	Moderate	5
1.2.1	Is the forest making progress toward increasing the percentage of montane conifer forests in Condition Class 1?	Condition Class	Use baseline acres of Montane Conifer, Fire Regime I, from the 2006 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 35 years; and adding the areas that have been mechanically treated, areas that have had prescribed under burning, and areas that have had wildfire over the five year monitoring period	Moderate	5
1.2.2	Is the forest making progress toward maintaining or increasing the percentage of chaparral and coastal sage scrub in Condition Class 1?	Condition Class	Use baseline acres of Chaparral, Coastal Sage Scrub, Gabbro, Serpentine, Closed-cone conifer, and Lower montane vegetation types, Fire Regime IV, from the 2006 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have a return interval of disturbance that is less than 35 years over the five year monitoring period through mechanical treatment, prescribed under burning, and wildfire; and adding the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 35 years	Moderate	5
1.2.3	Has the forest been successful at maintaining long fire-free intervals in habitats where fire is naturally uncommon?	Veg. Type Extent Fire	Use baseline acres of Alpine and Subalpine, Desert woodlands, forests and scrub, and Bigcone Douglas-fir vegetation types, Fire Regime V, from the 2006 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have a return interval of disturbance that is less than 200 years over the five year monitoring period through mechanical treatment, prescribed under burning, and wildfire; and adding the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 200 years	Moderate	5
2.1	Are the national forests' inventory of invasive plants and animals showing a stable or decreasing	Invasive Plants and Animals	Establish baseline acres of reported occurrences of invasive plant and animal species; subtracting the areas that have been effectively treated; and adding areas where new presence of invasive species has	Moderate	5



Goal	Monitoring Question	Indicators	Monitoring Action	Data Reliability	Report Period (Years)
	trend in acres of invasives?		been reported		
3.1	Are trends in indicators and visitor satisfaction surveys indicating that the forest has provided quality, sustainable recreation opportunities that result in increased visitor satisfaction?	Visitor Satisfaction	Use baseline scores in Visitor Satisfaction from National Visitor Use Monitoring (NVUM) that occurred around the 2006 Southern California Land Management Plans and comparing the five year NVUM Visitor Satisfaction scores	Moderate	5
3.2	Are trends in indicators and visitor satisfaction surveys depicting the forest has provided solitude and challenge in an environment where human influences do not impede the free play of natural forces?	Natural Processes	Baseline scores in Visitor Satisfaction for Wilderness from NVUM that occurred around the 2006 Southern California Land Management Plans and compare the five year NVUM Visitor Satisfaction scores for Wilderness; national reporting systems for management actions in wilderness; and accomplishment data related to the National 10-year Wilderness Stewardship Challenge	Moderate	5
		Wilderness	Compare the acres of Wilderness from the 2006 Southern California Land Management Plans analysis with the five year GIS acres	Moderate	5
4.1a	Has the forest been successful at protecting ecosystem health while providing mineral and energy resources for development?	Energy Success at protecting Ecosystem Health	Compare the number of mineral and energy development projects proposed with those approved to establish a baseline of impacts to resources; Compare the number of acres of habitat conserved as part of mitigation for mineral and energy development projects	Moderate	5
4.1b	Has the forest been successful at protecting ecosystem health while providing renewable resources for development?	Renewable Resources Success at protecting Ecosystem Health	Compare the number of renewable resource projects proposed with those approved to establish a baseline of impacts to resources; Compare the number of acres of habitat conserved as part of mitigation for renewable resource projects	Moderate	5
4.2	Are designated utility corridors being fully utilized prior to designation of new corridors serving similar market needs?	Utility Corridors	Comparing the number of Utility Corridors from the 2006 Southern California Land Management Plans analysis with the five year number	Moderate	5
5.1	Is the forest making progress toward sustaining Class 1 watershed conditions while reducing the number of Condition Class 2 and 3 watersheds?	Sustaining Class 1 watershed conditions while reducing the number of Condition Class 2 & 3 watersheds	Compare baseline number of watersheds in each Condition Class from the 2006 Southern California Land Management Plans analysis with the five year Watershed Condition Assessment	Moderate	5

Goal	Monitoring Question	Indicators	Monitoring Action	Data Reliability	Report Period (Years)
5.2	Is the forest making progress toward reducing the number of streams with poor water quality or aquatic habitat conditions?	Stream Condition - in Impaired State listed 303(d) streams	Compare the number of streams listed as impaired from the 2006 Southern California Land Management Plans analysis with the five year number	Moderate	5
6.1	Is forest rangeland management maintaining or improving progress towards sustainable rangelands and ecosystem health by increasing the number of key areas in good and fair condition?	Rangeland Condition	Compare baseline percent of Key Areas in active allotments meeting or moving towards desired conditions from the 2006 Southern California Land Management Plans analysis with five year percent	Moderate	5
6.2	Are trends in resource conditions indicating that habitat conditions for fish, wildlife, and rare plants are in a stable or upward trend?	MIS	Use baseline MIS habitat condition from the 2006 Southern California Land Management Plans analysis and compare the existing MIS habitat condition on the southern California National Forests	Moderate	5
7.1	Is the forest balancing the need for new infrastructure with restoration opportunities or land ownership adjustment to meet the desired conditions?	Road Density Inventories	Calculate the miles of road divided by the acres of NFS lands and compare from the 2006 Southern California Land Management Plans analysis	Moderate	5
		Road Miles	Compare the miles of authorized and administrative roads from the 2006 Southern California Land Management Plans analysis with five year assessment	Moderate	5
		Land Ownership Complexity	Calculate the miles of exterior and interior boundary divided by the acres of NFS lands and compare from the 2006 Southern California Land Management Plans analysis	Moderate	5

## Part 2 Monitoring

Monitoring in Part 2 of the forest plan is focused on program implementation including inventory. Actual performance is tracked over time through annual documentation of accomplishment and these trends are evaluated periodically to determine if the national forests need to shift program strategies. These data are reported in the annual monitoring and evaluation report as part of the national forests' implementation monitoring efforts. The current system integrates annual budgets with programs of work and links these to tracking of strategic plan performance indicators. (Table 57).

**Table 57. Part 2 Monitoring Summary**

Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
Acres of Terrestrial Habitat Enhanced	High	1	1
Miles of Aquatic Habitat Enhanced	High	1	1
Acres of Noxious Weeds Treated	High	1	1
Acres of Vegetation Improved (also see Hazardous Fuels Reduction)	High	1	1
Acres of Watershed Improved	High	1	1
Acres of Land Ownership Adjusted	High	1	1
Number of Heritage Resources Managed to Standard	Mod	1	1
Products Provided to Standard (Interpretation and Education)	Mod	1	1
Recreation Special Use Authorizations Administered to Standard	Mod	1	1
PAOT Days Managed to Standard (Developed Sites)	Mod	1	1
Recreation Days Managed to Standard (General Forest Areas)	Mod	1	1
Land Use Authorizations Administered to Standard	Mod	1	1
Number of Mineral Operations Administered	High	1	1
Manage Grazing Allotments	High	1	1
Acres of Hazardous Fuel Reduction	High	1	1
Miles of Passenger Car Roads Maintained to Objective Maintenance Level	High	1	1
Miles of High Clearance & Back Country Roads Maintained to Objective Maintenance Level	High	1	1
Miles of Road Decommissioned	High	1	1
Miles of Trail Operated and Maintained to Standard	Mod	1	1

Two additional forest-specific monitoring questions are included in Part 2 of the forest plan for the San Bernardino National Forest. These questions are:

Outcome Evaluation Question(s): Is pebble plain habitat being conserved over the long-term through the implementation of conservation strategies? Are resource conditions at pebble plain complexes indicating a stable or upward trend towards meeting desired conditions?

Outcome Evaluation Question(s): Is carbonate habitat being conserved over the long-term through the implementation of the Carbonate Habitat Management Strategy (CHMS) actions?

## Part 3 Monitoring

Implementation and effectiveness monitoring for Part 3 of the forest plan is conducted at the project level. All project activities are documented in reporting systems. Annually, a randomly

selected sample of projects and on-going activities (at least 10 percent) are reviewed. A small review team visits the selected projects to review the effectiveness of applying forest plan design criteria. If problems in implementation are detected, or if the design criteria are determined to be ineffective, then the team recommends corrective actions. Corrective actions may include forest plan amendment(s) if necessary to improve the effectiveness of the design criteria. Results of this monitoring are reported annually in the forest plan monitoring and evaluation report. In addition, design criteria (including new laws or regulations referenced in Appendix A) are updated (Table 58).

**Table 58. Part 3 Monitoring Summary**

Activity, Practice Or Effect To Be Measured	Monitoring Question	Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
<b>Sample of ongoing activities and projects.</b>	Are projects being implemented consistent with forest plan direction? How well have objectives been met and how closely have management standards and guidelines been applied?	Project Design Criteria	Mod	1	1
<b>Assigned sample of ground disturbing activities for BMPEP monitoring.</b>	Are projects being implemented consistent with forest plan direction? Have project mitigation measures been effective at improving environmental conditions as expected?	Best Management Practices	Mod	1	1

Since the Records of Decision were signed in 2006, the four forests have implemented the Forest Plans to varying degrees including monitoring and evaluation. The inventory of invasive plants and animals for Forest Goal 2.1 – Invasive Species has not been implemented due to shifts in management direction and lack of funding. The workload associated with the inventory has been determined to be infeasible due to limited effectiveness and changing conditions of invasive plants and animals across the four forests. The four forests have instead evaluated the effectiveness of treatments and the movement toward desired conditions through the cumulative effect of treatments. Additionally, the four forests have not reviewed a randomly selected sample of at least 10 percent of on-going activities, but instead have reviewed a fixed number of certain types of activities each year:

1. List all ongoing projects and activities as identified in INFRA and SUDS.
2. The following guidelines are used by the four forests in lieu of the random selection of 10 percent of ongoing projects on each individual forest:
  - Recreation sites: 2 campgrounds, 2 Recreation special use areas (i.e. Recreation Residence Tract, Organizational Camp), 1 trail head, and 1 minor recreation site (e.g. picnic area)
  - Grazing allotments: coordinate with BMPEP monitoring
  - Road maintenance contracts: coordinate with BMPEP and RO INFRA Roads monitoring
  - OHV roads, trails, and areas: 1 of each
  - Non-recreation special use authorizations: 1-2 projects

## CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

### Introduction

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Several comments on the Draft SEIS focused on the effects associated with land management plan decisions. In particular, there was concern with the statement in the Draft SEIS that the planning actions associated with the plan amendment did not have any direct effects on the environment. This introduction section has been revised to clarify the nature of planning decisions and how those decisions may affect various resources.

Land management plans are programmatic documents. The LMPs are permissive in that they allow, but do not mandate, certain activities. The standards contained in the LMPs operate as parameters within which projects and activities must take place. Approval of any project must be consistent with these management standards. If a project cannot be conducted within these parameters, the project cannot go forward unless the plan is amended to allow for the project. Projects occur only after they are proposed, their effects on the environment are considered, and a decision is made to carry out the project.

As described in more detail in the response to concern #94, (Appendix 4) direct effects are those effects which are caused by the action and occur at the same time and place. Since decisions made in a planning document such as an LMP do not authorize any ground disturbing activities, these planning decisions do not have a direct effect on the environment. Since planning decisions do set parameters for future projects, and would have an effect on how future projects are designed and evaluated, the effects are characterized as indirect effects. For clarity, the various sections in the analysis have been revised to describe the general types of “effects” that may occur during plan implementation. The analysis also considers how the proposed change in Land Use Zones (LUZs) could influence future trends in these activities.

### Analysis assumptions

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The following discussion summarizes the key assumptions made in the analysis. The environmental effects of specific actions or activities (projects) are not discussed in this document since no specific projects or activities are proposed. Future projects and activities that implement the LMP will use specific environmental analysis to disclose the effects of the project.

### Management Direction

The analysis of effects assumes activities within the IRAs are subject to the requirements of law, regulation, Forest Service policy and the standards and guidelines in the 2006 LMPs. The LMP summarizes the relevant laws, regulations and policy that apply in Part 3, Appendix A.

**Roadless Area Conservation Rule (RACR)** – As described in Chapter 2 the RACR as a regulation supersedes the forest plan. The forest plan amendment process cannot lessen the requirements of the RACR. The effects analysis assumes that the limitations on road construction and vegetation removal specified in the RACR will apply in all IRAs.

**Wilderness Act** – Areas that are allocated to RW will be managed as if they are designated wilderness. The 1964 Wilderness Act provides general direction for the administration of

wilderness areas and subsequent legislation that designated additional wilderness areas has also added to this direction. The Congressional Research Service (CRS) completed a review of the wilderness act and the subsequent 117 statutes and summarized the direction related to administration of resources. This document, *The Wilderness Laws: Statutory Provisions and Prohibited and Permitted Uses*, authored by Ross W. Gorte in February 2011 is available in the project record and cited as CRS 2011. The analysis assumes that Congress will continue to enact wilderness legislation consistent with the record summarized in CRS 2011.

**LMP direction** – Each LMP lists forest specific standards in Part 2 and province-wide standards in Part 3. The standards define the fundamental requirements for activities implemented or authorized by the Forest Service. Standards can be changed by a forest plan amendment.

The analysis assumes that plan implementation will follow the Land Use Zone (LUZ) suitability tables and individual program strategies in Part 2 of the current LMPs. Tables 59 to 62 display the suitability of various activities within each LUZ, with a column that summarizes the requirements of the RACR for that activity.

Activities are allowed on the national forests if they are suitable under the LMP, consistent with law, regulation, and agency policy, and in conformance with the LMP standards. Specific to this analysis, the more restrictive condition would apply when there is a difference between the RACR and the LMP. For example, if the RACR allows for road construction or reconstruction by exception, areas allocated to BCNM land use zones under the LMP do not allow road construction or reconstruction and the more restrictive condition would apply.

Several activities are described in the suitable use tables as being permitted in designated areas only. Designated areas include roads and trails shown as open in the forest Motor Vehicle Use Maps (MVUMs), communications sites, transportation and utility corridors, grazing allotments, and special use permit areas.

A few activities are allowed by exception. The LMP describes these activities as conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances. These circumstances are evaluated at the project level prior to a decision that would allow the activity. In the context of this analysis it is important to recognize that activities allowed by exception by LMP direction must be conducted in a manner consistent with the RACR. For example, communication sites and renewable energy resources are two activities allowed in BCNM zones by exception. While they could be considered in an IRA, any development would need to occur without road construction to be consistent with the RACR.

The analysis in Chapter 4 has been revised to include a brief discussion of potential future developments within the planning area. The LMP or this LMP amendment does not approve any specific project, so any analysis of potential future developments is only provided for comparative purposes.

In addition to the suitability tables, each forest's LMP describes the desired condition for the individual LUZs. That narrative is repeated here for reader convenience.

**Developed Area Interface:** This zone includes areas adjacent to communities or concentrated developed areas with more scattered or isolated community infrastructure. The level of human use and infrastructure is typically higher than in other zones.

The characteristic Recreation Opportunity Spectrum (ROS) objectives are Rural and Roaded Natural. A number of highly popular developed recreation facilities, recreation and non-recreation special-uses facilities and national forest administrative facilities may be included in this zone. The level of development within this zone varies between areas that are highly developed to areas where no development has occurred.

The Developed Area Interface (DAI) zone is managed for motorized public access. The national forest road system is generally managed and maintained to a higher standard, facilitating public access to developed recreation opportunities and authorized infrastructure. A designated off-highway vehicle (OHV) system may be included in some locations, often including trailheads or staging areas leading to Back Country areas.

Most direct community protection Wildland/Urban Interface Defense Zones (see Appendix K in Part 3 of the forest plan) and some Threat Zones are anticipated to be located within the DAI zone.

Although this zone may have a broad range of higher intensity uses, the management intent is to limit development to a slow increase of carefully designed facilities to help direct use into the most suitable areas and concentrating on improving facilities before developing new ones. National Forest staff expect that there will be some road construction, but anticipate no more than a five percent net-increase in road mileage within this zone.

**Back Country:** This zone includes areas of the national forest that are generally undeveloped with few roads. The characteristic ROS objectives are Semi-Primitive Motorized with limited areas of Roaded Natural. Most of the national forest's remote recreation and administrative facilities are found in this zone. The level of human use and infrastructure is generally low to moderate.

The zone is managed for motorized public access on designated roads and trails. Some roads within this zone may be closed to public access. The majority of National Forest System roads and other road systems that interconnect areas of concentrated development are found in this zone. A network of low standard Back Country roads provide access for a wide variety of dispersed recreation opportunities in remote areas such as camping and access to trailhead facilities for hiking or biking. Some new trails may be constructed to improve opportunities between trails on the existing system. The majority of the designated OHV system is found here including limited areas that are designated for OHV use (Angeles and Cleveland National Forests).

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) are characteristic in this zone. Managers anticipate locating community protection vegetation treatments that require permanent roaded access (such as fuelbreaks) within the Back Country zone.

Although this zone generally allows a broad range of uses, management intent is to retain the natural character inherent in this zone and limit the level and type of development. National Forest staff expect to manage the zone for no increase or a very low level of increase in the national forest road system. Managers expect to limit development to a slow increase of carefully designed facilities to help direct use into the most suitable areas and remove temporary facilities when they are no longer needed.

**Back Country (Motorized Use Restricted):** This zone includes areas of the national forest that are generally undeveloped with few roads. Few facilities are found in this zone, but some may occur in remote locations. The characteristic ROS objectives are Semi-Primitive Motorized and Semi-Primitive Non-Motorized. The level of human use and infrastructure is low to moderate.

The zone will be managed for non-motorized (mechanized, equestrian, and pedestrian) public access. Motorized use is restricted to administrative purposes only that include Forest Service, other agency, or tribal government needs, as well as access needed to private land or authorized special-uses. Administrative access is intermittent and generally limited to existing roads or to temporary roads needed for resource management purposes. The intent is to use temporary roads or gated permanent roads while management is occurring and then gate the permanent roads or remove the temporary route when done.

A limited number of National Forest System roads and other road systems that access administrative and authorized facilities and private land are found here. A network of low standard Back Country roads provides access for a wide variety of non-motorized dispersed recreation opportunities including camping, hiking, biking, hunting and fishing. Designated OHV use is not suitable in this zone.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) are characteristic in this zone. Managers anticipate locating community protection vegetation treatments that require permanent roaded access (such as fuelbreaks) within the Back Country Motorized Use Restricted zone.

Although this zone allows a range of low intensity land uses, the management intent is to retain the natural character of the zone and limit the level and type of development. Some roads will be constructed and maintained, but the intent is to manage the zone for no increase or a very low level of increase in system development. Managers will consider expanding the ability of existing facilities to meet demand before proposing new facilities and removing temporary facilities when they are no longer needed.

**Back Country Non-Motorized:** This zone generally includes areas of the national forest that are undeveloped with few, if any roads. The characteristic ROS objective is Semi-Primitive Non-Motorized. Developed facilities supporting dispersed recreation activities are minimal and generally limited to trails and signage. The level of human use and infrastructure is low.

The zone is managed for a range of non-motorized uses that include mechanized, equestrian and pedestrian public access. Administrative access (usually for community protection) is allowed by exception for emergency situations and for short duration management purposes (such as fuel treatment). The intent is to use temporary routes while management is occurring and then close or remove the route. Access to authorized facilities and to private land is not anticipated but may occur by exception when there are existing rights to such access.

A network of Back Country trails provide public access for a wide variety of non-motorized dispersed recreation opportunities including remote area camping, hiking, mountain biking, hunting and fishing. Designated OHV use is not suitable in this zone and no designated OHV routes are located in this zone.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Managers anticipate locating community protection vegetation treatments that



require only temporary roaded access (such as mechanical thinning of trees or prescribed burning) within the Back Country Non-Motorized zone.

While a range of non-motorized public uses are generally allowed, the management intent is to typically retain the undeveloped character and natural appearance (fuelbreaks that contrast with the natural character may be present) of this zone and to limit the level of development to a low level of increase. Facility construction (except trails) is generally not allowed, but may occur in remote locations where roaded access is not needed for maintenance. Managers are expected to remove temporary facilities when they are no longer needed.

**Critical Biological:** This zone includes the most important areas on the national forest to manage for the protection of species-at-risk. Facilities are minimal to discourage human use. The level of human use and infrastructure is low to moderate.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Community protection vegetation treatments within the Critical Biological land use zone may occur by exception. Managers will consider species and habitat needs in these cases.

The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development to manage for protection of species-at-risk. Activities and modification to existing infrastructure are allowed if they are beneficial or neutral to the species for which the zone was primarily designated (FEIS Table 525: Cleveland NF Critical Biological Land Use Zones). Human uses are not excluded but are more restricted in this zone than in Back Country Non-Motorized zones in order to protect species needs. Low impact uses, such as hiking, mountain biking and hunting are generally allowed. There are no National Forest System or non-system roads in this zone. Road density will not be increased.

**Existing Wilderness:** This zone includes congressionally designated wildernesses. Only uses consistent with all applicable wilderness legislation and with primitive character are allowed in existing wildernesses. Road access is limited to uses identified in the specific legislation designating the wilderness (see wilderness in the forest-specific design criteria of Part 2 of the forest plan). The characteristic Recreation Opportunity Spectrum objective is Primitive with limited areas of Semi-Primitive Non-Motorized.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Community protection vegetation treatments within the existing wilderness zone may occur by exception. In these cases, managers will consider wilderness needs.

The management intent is to administer this zone for the use and enjoyment of people while preserving its wilderness character and natural conditions. Non-conforming uses will be removed to preserve wilderness character.

**Recommended Wilderness:** This zone includes land that the Forest Service is recommending to Congress for wilderness designation and will be managed in the same manner as existing wilderness so that wilderness attributes of the area are retained until either Congress passes legislation designating the wilderness or the area is released from consideration. If Congress elects to not designate an area, the area would be zoned as Back Country Non-Motorized until modified by a subsequent plan amendment.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Community protection vegetation treatments within the recommended wilderness land use zone may occur by exception. In these cases, managers will consider wilderness needs.

The management intent is to administer this zone for the use and enjoyment of people while preserving its wilderness character and natural conditions.

**Table 59. Suitable Uses in Land Use Zones: Resource Management Activities**

<b>Land Use Zone:</b>	<b>DAI</b>	<b>BC</b>	<b>BCMUR</b>	<b>BCNM</b>	<b>CB</b>	<b>RW/W</b>	<b>IRA/RACR</b>
<b>Activity or Use</b>	<b>Developed Areas Interface</b>	<b>Back Country</b>	<b>Back Country Motorized Use Restricted</b>	<b>Back Country Non-Motorized</b>	<b>Critical Biological</b>	<b>Recommended Wilderness/Wilderness</b>	<b>36 CFR 294 Subpart B</b>
Rangeland Type Conversion for Forage production	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Restoration of Vegetation Condition	Suitable	Suitable	Suitable	Suitable	*By Exception	Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Disposal of National Forest System lands	*By Exception	*By Exception	*By Exception	*By Exception	*By Exception	Not Suitable	Suitable

\* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

<sup>1</sup> Suitable if the activity is currently authorized, or can be conducted using existing classified roads or trails. Timber cutting is allowed incidental to the activity (294.13((b)(2)).

**Table 60. Suitable Uses in Land Use Zones: Public Use and Enjoyment**

<b>Land Use Zone:</b>	<b>DAI</b>	<b>BC</b>	<b>BCMUR</b>	<b>BCNM</b>	<b>CB</b>	<b>RW/W</b>	<b>IRA/RACR</b>
<b>Activity or Use</b>	<b>Developed Areas Interface</b>	<b>Back Country</b>	<b>Back Country Motorized Use Restricted</b>	<b>Back Country Non-Motorized</b>	<b>Critical Biological</b>	<b>Recommended Wilderness Wilderness</b>	<b>36 CFR 294 Subpart B</b>
Recreation Residence Tracts	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Organization Camps	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Lodges, Resorts and Clubs	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Hunting and Fishing	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)	Regulated by the State (CDF&W)
Target Shooting Areas	*By Exception	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Public Motorized Use on Forest System Roads	Suitable	Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Authorized Motorized Use	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable

<b>Land Use Zone:</b>	<b>DAI</b>	<b>BC</b>	<b>BCMUR</b>	<b>BCNM</b>	<b>CB</b>	<b>RW/W</b>	<b>IRA/RACR</b>
<b>Activity or Use</b>	<b>Developed Areas Interface</b>	<b>Back Country</b>	<b>Back Country Motorized Use Restricted</b>	<b>Back Country Non-Motorized</b>	<b>Critical Biological</b>	<b>Recommended Wilderness Wilderness</b>	<b>36 CFR 294 Subpart B</b>
Off-Highway Vehicle Use on Forest System Roads and Trails	Designated Roads and Trails	Designated Roads and Trails	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Public Motorized Use off Forest System Roads and Trails	Suitable in Designated Open Areas	Suitable in Designated Open Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable <sup>2</sup>
Mountain Bikes Forest System Roads and Trails	Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Not Suitable	Suitable <sup>2</sup>
Dispersed Area Camping	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Suitable Unless Otherwise Restricted	Not Suitable	Suitable Unless Otherwise Restricted	Suitable <sup>3</sup>

\* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

<sup>1</sup> Suitable if the activity is currently authorized, or can be conducted using existing classified roads or trails. Timber cutting is allowed incidental to the activity (294.13((b)(2)).

<sup>2</sup> Subject to travel management restrictions 36 CFR 212 and 36 CFR 261

<sup>3</sup> Subject to forest closures 36 CFR 261

**Table 61. Suitable Uses in Land Use Zones: Commodity and Commercial Uses**

Land Use Zone:	DAI	BC	BCMUR	BCNM	CB	RW/W	IRA/RACR
Activity or Use	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Recommended Wilderness/Wilderness	36 CFR 294 Subpart B
(Non-Rec) Special Uses: Low Intensity Land Use	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Communication Sites	Designated Areas	Designated Areas	Designated Areas	*By Exception	*By Exception	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Livestock Grazing	Designated Areas	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Designated Areas	Suitable
Major Transportation Corridors	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not suitable
Major Utility Corridors	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Road construction or re-construction	Suitable	Suitable	Suitable for authorized use	Not Suitable	Not Suitable	Not Suitable	By Exception <sup>4</sup>
Developed Facilities	Suitable	Suitable	*By Exception	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>

Land Use Zone:	DAI	BC	BCMUR	BCNM	CB	RW/W	IRA/RACR
Activity or Use	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Recommended Wilderness/Wilderness	36 CFR 294 Subpart B
Oil and Gas Exploration and Development Areas	Suitable	Suitable	*By Exception	*By Exception	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Minerals Resources Exploration and Development	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Renewable Energy Resources	Suitable	Suitable	*By Exception	*By Exception	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>
Wood Products, including fuelwood harvesting	Suitable	Suitable	Suitable	Suitable	*By Exception	Not Suitable	By Exception
Special Forest Products	Suitable	Suitable	Suitable	Suitable	*By Exception	*By Exception	Suitable

\* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

<sup>1</sup> Suitable if the activity is currently authorized, or can be conducted using existing classified roads or trails. Timber cutting is allowed incidental to the activity (294.13((b)(2)).

<sup>2</sup> Subject to travel management restrictions 36 CFR 212 and 36 CFR 261

<sup>3</sup> Subject to forest closures 36 CFR 261 <sup>4</sup> Subject to 36 CFR 294.12(b)

**Table 62. Suitable Uses in Land Use Zones: Fire and Fuels Management**

Land Use Zone:	DAI	BC	BCMUR	BCNM	CB	RW/W	IRA/RACR
Activity or Use	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Recommended Wilderness/Wilderness	36 CFR 294 Subpart B
Community Protection Areas	Suitable	Suitable	Suitable	Suitable	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Fuelbreak Construction including type conversion	Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception	Suitable if activity meets prohibitions <sup>1</sup>
Wildland Fire Use Strategy <sup>3</sup>	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Suitable if activity meets prohibitions <sup>1</sup>

\* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

<sup>1</sup> Suitable if the activity is currently authorized, or can be conducted using existing classified roads or trails. Timber cutting is allowed incidental to the activity (294.13((b)(2)).

<sup>3</sup> Wildland Fire Use Strategy is no longer part of the federal wildland fire policy.



## Land Use Zone Allocations

The analysis of effects is based on the change in future suitable uses that would occur for each alternative if LUZ allocations are applied within the planning area as described. The differences in LUZ allocations between the alternatives are summarized in Chapter 2, Table 4 and that table is repeated here for reader convenience. Table 63 summarizes LUZ allocations in acres by alternative within the planning area. The planning area includes the 37 IRAs and additional areas adjacent to the IRAs that were included in the RW areas.

The common factor in all four alternatives is that there are no changes to Existing Wilderness (EW) LUZs. In Alternative 2, there is an increase in acres of Back County Non-Motorized (BCNM) and Recommended Wilderness (RW), with a decrease in acres of Back Country (BC) and Back Country Motorized Use Restricted (BCMUR), Developed Area Interface (DAI), and Critical Biological zone (CB) relative to Alternative 1. Alternative 2a adds some RW areas and reduces the acreage of RW in other areas, with a net increase in RW allocations relative to Alternative 2. In Alternative 3, there is an increase in RW acres with a commensurate decrease of acres in other land use zones relative to Alternatives 2 or 2a. The Suitable Uses Tables in the 2006 Forest Plan (reproduced in the beginning of this section) detail the types of activities that are suitable within the LUZs.

**Table 63. Land Use Allocation by Alternative**

<b>Land Use Zone</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 2a</b>	<b>Alternative 3</b>
<b>Angeles</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	2,566	1,001	828	314
Back Country Motorized Use Restricted	4,132	1,469	707	707
Back Country Non-Motorized	66,393	30,897	30,577	1,033
Critical Biological	326	12	0	0
Developed Area Interface	1,505	476	476	430
Existing Wilderness	8	8	8	8
Recommended Wilderness	0	41,065	42,333	72,437
<b>Cleveland</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	6,262	1,965	1,876	1,752
Back Country Motorized Use Restricted	6,321	4,124	2,919	2,885
Back Country Non-Motorized	68,308	34,974	34,732	6,118
Critical Biological	507	507	0	0
Developed Area Interface	3,031	1,325	1,293	1,288
Existing Wilderness	0	0	0	0
Recommended Wilderness	0	41,535	43,609	72,387
<b>Los Padres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	154,641	15,936	15,943	8,152
Back Country Motorized Use Restricted	164,697	10,112	10,112	3,399
Back Country Non-Motorized	86,521	379,810	379,803	59,727
Critical Biological	395	395	395	395
Developed Area Interface	7,032	7,032	7,032	7,032
Existing Wilderness	936	936	936	936
Recommended Wilderness	5,306	5,306	5,306	339,886
<b>San Bernardino</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
Back Country	6,882	394	394	377
Back Country Motorized Use Restricted	3,018	816	173	191
Back Country Non-Motorized	20,332	29,692	29,692	155
Critical Biological	0	0	0	0
Developed Area Interface	1,440	773	773	773
Existing Wilderness	11	11	11	11
Recommended Wilderness	18,218	18,216	18,859	48,394

## Natural Resources Environment

### Biological Resources

The analysis of biological resources includes the analysis of vegetation conditions, wildlife, botanical resources, and invasive species.

### Vegetation Conditions

Table 64 compares the potential effects of the three alternatives on vegetation and tree Management Indicator Species (MIS). Relative qualitative measurements (less, more, etc.) were used to compare alternatives.

**Table 64. Comparison of the alternatives for vegetation effects.**

INDICATOR	ALT 1	ALTs 2 and 2a	ALT 3
Motorized/mechanized access	No change from existing environment	Less motorized/mechanized access than ALT 1 but more than ALT 3.	Least motorized/mechanized access of alternatives.
Non-motorized access	No change from existing environment	More non-motorized access than ALT 1 but less than ALT 3.	Most non-motorized access of alternatives.
Effects	No change from existing environment	Less removal of vegetation and tree MIS than ALT 1 due to limited motorized access/mechanized use.	Least amount of vegetation and tree MIS removal compared to ALT 1 and 2 due to significantly limited motorized access/mechanized use.

### Effects Common to Vegetation and Tree MIS

#### Alternative 1 - No Action

There would be no changes to currently designated land use zones, including special designations in Alternative 1; the existing management direction would continue. All allowable vegetation management activities (i.e. fire suppression, fuels management) remain the same. Potential effects include vegetation removal for roads, trails and fuelbreaks, modifications of stand structure and species composition resulting from hazardous fuels modifications and fire suppression activities.

#### Alternative 2 - Proposed Action and Alternative 2a – Preferred Alternative

While there is a small difference in acreage in BCNM and RW between Alternatives 2 and 2a, there is no difference in the effects to vegetation management. There would be an increase in acres of BCNM and RW, a decrease in acres of BC and BCMUR, DAI, CB, and no change in acres of EW in both Alternative 2 and 2a. A reduction in acres of BC, BCMUR, and DAI generally assumes a reduction in development for motorized use, especially motorized recreational use. Effects common to vegetation and tree MIS include elimination of impacts resulting from road construction for access and motorized recreation. As in Alternative 1, potential effects include vegetation removal for roads, trails and fuelbreaks, modifications of

stand structure and species composition resulting from fuels modifications and fire suppression activities.

### **Alternative 3 – Recommended Wilderness Emphasis**

There would be a significant increase in RW acres and a concomitant decrease in acres of BC, BCMUR, BCNM, DAI, CB, but no change in acres of EW in Alternative 3. This alternative significantly decreases human disturbance by prohibiting public motorized access and the use of mechanized tools/equipment for fuels reductions and fuelbreak construction. Primitive types of recreation are permitted. As in Alternatives 2 and 2a, effects common to vegetation and tree MIS include elimination of vegetation removal resulting from road construction for access and motorized recreation.

### **Wildlife**

The National Environmental Policy Act (NEPA) requires Forest Service-proposed projects to analyze impacts on federally listed threatened and endangered (T&E) species or proposed (P) or candidate (C) species under the Endangered Species Act (ESA). However, the planning actions being considered in this SEIS are programmatic in nature. Since planning decisions do not authorize any ground disturbing activities, the decisions do not have an immediate direct effect on wildlife individuals. Direct effects are not realized until land management plans are implemented through project actions. The decisions from this SEIS would affect future activities that could be allowed in the different land use zones which have effects on wildlife individuals and their habitats.

Environmental effects have been analyzed on a province scale for the four southern California national forests (Angeles, Cleveland, Los Padres and San Bernardino). This analysis focuses only on the species that have known occurrences and/or designated critical habitats within the 37 IRAs. The potential types of effects that may occur during plan implementation are discussed here along with an analysis of how the proposed change in land use zones may influence future trends in these activities. The environmental effects of specific actions or activities (projects) are not discussed in this document. Future, project-specific environmental analysis will disclose the effects of projects that implement the LMP.

### **Methodology**

Information on species occurrences and acres of critical habitats affected contained in this analysis is derived from the most accurate, readily available data at the time of this document. GIS data was gathered from the US Fish and Wildlife Service's species occurrence and [Carlsbad Office critical habitat portal](#), the [national critical habitat portal](#), [California Natural Diversity Database](#), and Forest Service's Natural Resource Manager – NRIS. The analysis is limited because this analysis covers four national forests and focuses on the land use zoning changes in the 37 IRAs rather than ground disturbance activities. Relative qualitative measurements (less, more, etc.) will be used for comparison of alternatives.

The analysis of impacts on wildlife species and their associated habitats focused on the use of the following indicators:

- Occurrence of TEPC species
- Critical habitat acres

- Motorized access
- Non-motorized access
- Ability to maintain/enhance/restore habitats (wildlife management activities)
- Ability to implement ESA recovery actions/activities

### **Effects Common to All Species**

Wildlife occurs across all habitat types regardless of LUZ. Critical habitats can also be designated on national forests regardless of LUZ. In general, land use zoning changes do not have effects on wildlife species. Land use zoning directs the management of national forests but does not directly influence where or when an animal will occur. However, the type of activities that are either prohibited or permitted on national forest system lands as a result of land use zoning do have indirect effects on wildlife and their habitats. Refer to Part 2 of each of the southern California national forests' Land Management Plans for specific definitions of what activities are prohibited and/or permitted within each LUZ.

Some assumptions were made during this effects analysis regarding land use zoning and its effect on wildlife and habitat. One assumption is that recreation will continue on national forests regardless of land use zoning. However, the type of recreation (i.e. motorized driving vs. hiking) would change as land use zones change. No assumptions can be made that recreation would decrease or increase with more restrictive land use zones. Likewise, the designations of "recommended wilderness" may not necessary result in any changes in recreation levels in these specific IRAs. It is important to recognize that national forests in southern California are some of the most visited national forests in the United States. It is also important to recognize that California is one of the most populated states as well. As the human population of southern California continues to grow there will be an increase in the use of the four forests. However, the specific type and amount of use cannot be predicted.

Another assumption is that wildlife management activities that promote the recovery of species, particularly federally listed species, are consistent with all land use zoning. Also, requirements of existing biological opinions (such as terms and conditions for incidental take statements) will also continue to be implemented. This assumption is particularly important since the project-specific and on-going activities Biological Opinions are the guiding documents for management activities that have direct effects to wildlife and their habitat.

Additionally, the 1964 Wilderness Act (P.L. 88-577; 16 U.S.C. §§ 1131-1136) explicitly directs that wilderness designations has no effect on state jurisdiction or responsibilities over fish and wildlife. Section § 4(d)(8) states that "...nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests." This direction allows agencies such as California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to continue to manage wildlife species as necessary even in recommended wilderness or existing wilderness land use zones. Refer to *The Wilderness Laws: Statutory Provisions and Prohibited and Permitted Uses*, prepared by Ross W. Gorte for the Congressional Research Service (CRS) (CRS 2011) for a summary of direction related to administration of resources. This document is available in the SEIS project record. The analysis assumes that Congress will continue to enact wilderness legislation consistent with the record summarized in CRS 2011.

The Wilderness Act also allows uses, activities, or infrastructure that does not conform to the general prohibitions on commercial activities, motorized access, and infrastructure. Many of these non-conforming permitted uses were explicitly allowed in the Wilderness Act, including access for management and emergencies as well as activities for continued motorized access, livestock grazing, and water project developments. Subsequent statutes have expanded on these provisions and have addressed additional concerns, such as fish and wildlife management activities, development or maintenance of and access to certain existing and potential infrastructure, and access for other specific purposes. This is particularly important for the maintenance of structures such as water troughs that may be used by livestock and wildlife. CRS 2011 provides guidelines for wildlife management in wilderness.

Table 65 identifies the amount of critical habitat that is within each national forest by land use zone for each of the alternatives. Critical habitat for southern steelhead trout (southern California DPS) is shown in miles, not acres. The following species have critical habitats that overlap with the 37 IRAs: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow-legged frog, San Bernardino kangaroo rat, southwestern willow flycatcher, southern steelhead (southern California DPS), and vernal pool fairy shrimp.

**Table 65. Critical Habitat acres by Alternative, Species, and Land Use Zone**

	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
<b>Angeles National Forest</b>				
<b>Arroyo toad</b>				
BC	0	0	0	0
BCMUR	0	0	0	0
BCNM	5.5	0	0	0
CB	212.1	8.3	0	0
DAI	0	0	0	0
EW	0	0	0	0
RW	0	209.3	217.6	217.6
<b>California condor</b>				
BC	0	0	0	0
BCMUR	9.8	9.8	9.8	9.8
BCNM	147.8	147.8	147.8	147.8
CB	0	0	0	0
DAI	0	0	0	0
EW	0	0	0	0
RW	0	0	0	0
<b>California red-legged frog</b>				
BC	0	0	0	0
BCMUR	0	0	0	0
BCNM	1911	1911	1911	44.7
CB	0	0	0	0
DAI	0.3	0.3	0.3	0.3
EW	0	0	0	0
RW	0	0	0	1865.91
<b>Cleveland National Forest</b>				
<b>Arroyo toad</b>				
BC	14.0	14.0	0	14.0
BCMUR	323.3	253.4	253.4	253.4
BCNM	959.4	128.9	128.9	12.9
CB	0	0	0	0
DAI	23.0	22.2	22.2	22.2
EW	0	0	0	0
RW	0	901.2	901.2	1,017.2
<b>Coastal California gnatcatcher</b>				
BC	369.31	38.7	38.7	0
BCMUR	1336.6	1897.4	1700.7	1666.9
BCNM	3,994.2	490.2	460.8	221.8
CB	0	0	0	0
DAI	239.0	30.6	30.6	30.6
EW	0	0	0	0
RW	0	3,482.2	3708.3	4019.8
<b>Laguna Mountains skipper</b>				
BC	0.2	0	0	0
BCMUR	174.3	15.9	15.9	15.9
BCNM	31.9	190.5	190.5	191.5
CB	0	0	0	0
DAI	0	0	0	0
EW	0	0	0	0

RW		0	0	0	0
<b>Los Padres National Forest</b>					
<b>Arroyo toad</b>					
BC		891.3	134.0	134.0	104.6
BCMUR		52.2	20.0	20.0	11.1
BCNM		295.8	1,085.2	1,085.2	628.9
CB		208.3	208.3	208.3	208.3
DAI		0	0	0	0
EW		1.6	1.6	1.6	1.6
RW		0	0	0	494.6
<b>California condor</b>					
BC		546.4	525.8	525.8	478.8
BCMUR		933.2	78.6	78.6	57.1
BCNM		10,170.7	11,045.9	11,045.9	1,012.7
CB		14.3	14.3	14.3	14.3
DAI		68.3	68.3	68.3	68.3
EW		279.7	279.7	279.7	279.7
RW		1,663.3	1,663.3	1,663.3	11,765.0
<b>California red-legged frog</b>					
BC		7,364.9	1,675.6	1,675.6	1048.1
BCMUR		32,767.3	1,567.9	1,567.9	465.1
BCNM		13,510.7	50,399.5	50,399.5	73.6
CB		273.7	273.7	273.7	273.7
DAI		767.6	767.6	767.6	767.6
EW		46.2	46.2	46.2	46.2
RW		5,261.0	5,261.0	5,261.0	57,317.3
<b>Conservancy fairy shrimp</b>					
BC		21,587.8	594.8	594.8	542.0
BCMUR		0	0	0	0
BCNM		3,362.7	24,355.7	24,355.7	15,531.4
CB		0	0	0	0
DAI		0.9	0.9	0.9	0.9
EW		46.1	46.1	46.1	46.1
RW		0	0.0	0.0	8,877.0
<b>Least Bell's vireo</b>					
BC		687.5	116.5	116.5	27.0
BCMUR		258.5	39.0	39.0	10.1
BCNM		47.3	837.8	837.8	0.2
CB		0.2	0.2	0.2	956.2
DAI		0	0	0	0
EW		0	0	0	0
RW		0	0	0	0
<b>Southern steelhead – southern California DPS (in miles not acres)</b>					
BC		3.16	1.62	1.62	1.48
BCMUR		0.61	0.61	0.61	0.61
BCNM		17.7	19.3	19.3	0.19
CB		0	0	0	0
DAI		0.1	0.1	0.1	0.7
EW		0.5	0.5	0.5	0.49
RW		0	0	0	19.20
<b>Vernal pool fairy shrimp</b>					



BC	21,587.8	594.8	594.8	542.0
BCMUR	0	0	0	0
BCNM	3,362.7	24,355.7	24,355.7	15,531.4
CB	0	0	0	0
DAI	0.9	0.9	0.9	0.9
EW	46.1	46.1	46.1	46.1
RW	0	0	0	8,877.0
<b>San Bernardino National Forest</b>				
<b>Mountain yellow-legged frog</b>				
BC	0	0	0	0
BCMUR	0	0	0	0
BCNM	32.0	32.0	32.0	0
CB	0	0	0	0
DAI	0	0	0	0
EW	0.1	0.1	0.1	0.1
RW	0	0	0	32.0
<b>San Bernardino kangaroo rat</b>				
BC	4.3	4.3	4.3	4.3
BCMUR	0	0	0	0
BCNM	0	0	0	0
CB	0	0	0	0
DAI	40.5	40.5	40.5	40.5
EW	0	0	0	0
RW	0	0	0	0
<b>Southwestern willow flycatcher</b>				
BC	0	0	0	0
BCMUR	0	0	0	0
BCNM	23.4	35.9	35.9	9.2
DAI	21.7	9.2	9.2	0
EW	0	0	0	0
RW	15.4	15.4	15.4	51.3

Table 66 compares the potential effects of the four alternatives on wildlife species and their habitats. Relative qualitative measurements (less, more, etc.) were used for comparison of alternatives.

**Table 66. Comparison of Alternative Effects on Wildlife Species and Habitats**

<b>EFFECT</b>	<b>INDICATOR</b>	<b>ALT 1</b>	<b>ALTs 2 and 2a</b>	<b>ALT 3</b>
<b>Impacts to Federally Listed Species (T&amp;E)</b>	# T&E species affected	13	13	13
	Relative impact to individuals	No change from existing environment	Less impacts than ALT 1 due to limited motorized / mechanized use, but more than ALT 3. Less disturbance and individual mortality than ALT 1 due to limited motorized use/mechanized use.	Least amount of impacts of all alternatives due to significantly limited motorized /mechanized use. Least amount of disturbance and individual mortality than ALT 1, 2 and 2a due to significantly limited motorized use/mechanized use.
	Relative impacts to habitat	No change from existing environment	Less soil compaction and erosion and improved watershed condition than ALT 1. Potential for less habitat fragmentation from roads.	Least amount of soil compaction and erosion and potential for more improved watershed condition than ALT 1, 2 and 2a. Potential for least amount of habitat fragmentation.
	Motorized/mechanized access or use	No change from existing environment	Less motorized/mechanized use than ALT 1 but more than ALT 3.	Less motorized/mechanized use than ALT 1, 2 and 2a.
	Non-motorized access or use	No change from existing environment	More non-motorized use than ALT 1 but less than ALT 3.	Most non-motorized use than ALT 1, 2 and 2a.
	Ability to maintain/enhance wildlife improvement (guzzlers, drinkers etc.)	No change from existing environment	No change from existing environment	No change from existing environment except for type of tools used to maintain/enhance etc – RW restrictions on mechanized equipment use
	Recovery Plan actions/activities (Ability to maintain, enhance or treat occupied habitat)	Can maintain, enhance and treat.	Can maintain, enhance and treat.	Can maintain, enhance and treat.

<b>EFFECT</b>	<b>INDICATOR</b>	<b>ALT 1</b>	<b>ALTs 2 and 2a</b>	<b>ALT 3</b>
	Cumulative Effects	No change from existing environment	Less than ALT 1 due to increase in restricted use zone acres, but less than ALT 3.	Least amount of all alternatives due to greatest increase in restricted use zone acres.
<b>Impact to Critical Habitat</b>	# of CH affected	12	12	12
	Total acres of CH	No change from existing environment	No change from existing environment	No change from existing environment
	Relative Impact to critical habitat	No change from existing environment	Less habitat disturbance decreased soil erosion, fewer introduction of non-native species and decreased habitat fragmentation due to decreased motorized use than ALT 1.	Least amount of habitat disturbance, fewest introductions of non-native species and highest potential for soil and watershed improvement due to highest restriction on land use zones than ALT 1, 2 and 2a.
	Location of CH acres by LUZ	No change from existing environment	Some acres within BC, BCMUR, DAI. More acres are within BCNM and/or RW. No change to EW.	Fewer acres within BC, BCMUR, DAI. Most acres within BCNM and/or RW. No change to EW.
	Primary Constituent Elements	No change from existing environment	Higher protection of primary constituent elements than ALT 1, but less than ALT 3.	Highest protection of primary constituent elements than ALT 1, 2 and 2a.
<b>Spread of Non-native species and disease that may affect TES species</b>	Relative rate of spread	No change from existing environment	Lower rate of spread and infestation due to less motorized use	Least rate of spread of infestation due to RW

## **Alternative 1 - No Action**

There would be no changes to any land use zones, including special designation overlays (e.g. RNAs), in Alternative 1. The No Action alternative continues the implementation of the 2006 LMP and thus the effects are those delineated in the FEIS. The 2006 LMP goals, standards, and guidelines list desired conditions for biological resources. Biological resource indicators, such as TES species, would continue to be affected in the current manner they are affected now. All allowable wildlife management activities (i.e. hunting, wildlife viewing, and water development maintenance) remain the same. All IRAs would continue to be managed as they currently are according to the land use allocations that they occur in. Habitats for wildlife species would continue to be managed as they currently are. Land use zoning within critical habitats for threatened and endangered species remains the same.

Effects to TES wildlife individuals from current management include disturbance, trampling, harvesting, displacement and potential mortality of individuals or portions of a population as a result of use of the national forest. This effect is the current existing condition. Noise levels, especially motorized vehicles could continue to disturb native wildlife behaviors, causing flushing or fleeing of habitat when disturbed. Disturbance may alter an animal's behaviors and may even prevent individuals from communicating with each other due to the high noise levels. Animals may abandon nests or young when repeatedly disturbed, thereby reducing reproductive output. Animals may be accidentally killed under motorized vehicles and equipment. Overharvesting of wildlife (especially reptiles) for the pet trade may have localized effects on species.

Effects to wildlife habitats include fragmentation, soil erosion and compaction, and introduction of non-native species. Changes in habitat quality can occur as a result of the introduction of non-native plant species (i.e. weeds). Pack animals (i.e. horses and goats) that are fed on non-sterile feed on private lands may unintentionally distribute seed onto NFS lands, thereby introducing non-native species. Vehicles and equipment (motorized and non-motorized) could carry non-native plant seeds in tires and undercarriage and accidentally disperse them while traveling through the forest. Invasive wildlife species such as New Zealand mud snail, quagga mussels and red-eared slider turtles may be introduced into native habitats by people without understanding the effects on native wildlife. Zoonosis such as chytrid and white nose syndrome has been accidentally spread into the environment causing significant declines in wildlife populations of amphibians and bats.

Permitted activities such as livestock grazing may also affect soil compaction and cause erosion in areas of concentrated use, especially sensitive riparian areas. Public access to sensitive stream courses could result in sedimentation and reduced water quality of the stream. These negative effects all reduce the quantity and quality of available habitat for wildlife. Other activities such as habitat enhancement, non-native species removal, and maintenance of wildlife improvements (water source) are beneficial effects that result in increased habitat quality and quantity.

## **Alternative 2 - Proposed Action and Alternative 2a - Preferred Alternative**

The small change in BCNM and RW acres in Alternative 2a relative to Alternative 2 would not result in a difference in overall environmental consequences between these two alternatives. There would be an increase in acres of BCNM and RW, with decreases in acres of BC and BCMUR, DAI, CB, and no change in acres of EW in Alternatives 2 and 2a relative to Alternative 1. A reduction in acres of BC, BCMUR, and DAI generally assumes a reduction in

future development and motorized use of the national forests. More “primitive” types of recreational activities should occur in BCNM and RW. TES wildlife individuals would experience fewer impacts (mortality, disturbance, etc.) since new motorized access and use would be limited and in some areas prohibited. Existing authorized motorized access would not be removed. The removal of mechanized access and use in areas re-zoned as RW and the reduction of new motorized access and use in areas re-zoned as BCNM should be beneficial when compared to the effects from Alternative 1. A decrease in future road development should result in improved watershed conditions, reduced soil compaction and decreased habitat fragmentation. There should also be a reduction of noise generated from motorized vehicles. Non-motorized use/access and the use of mechanized equipment may still be permitted outside of RW. Non-motorized use is less intensive on the landscape than motorized use, so the effect is an overall improvement of habitat quality for wildlife in areas within the IRAs. There should be fewer opportunities for the introduction of non-native plants and animals with decreased motorized access to the national forest.

Management of wildlife enhancement (i.e. wildlife improvements such as water sources) and recovery actions (including the removal of non-native species) would also continue in all areas where it is appropriate to do so and consistent with law and regulation. Recovery actions in BCNM could use temporary roads and other mechanized equipment while recovery actions in RW would focus on actions compatible with wilderness management objectives.

It is possible that people may shift their recreation into specific areas where their preferred activity is still allowed. This may put pressure on habitats outside of and immediately around the more restrictive land use zone, and may cause some impacts to wildlife and habitat from increased use. Animal behavior can be disrupted or displacement of individuals or portions of a population could occur as a result of this shift in use. Animals could temporarily flee the area or the area may become abandoned. Thus individuals and habitats in more restrictive land use zones could experience improved habitat qualities, while individuals in less restrictive land use zones could experience decreased habitat qualities.

There is a reduction in acres of CB (Castaic) on the Angeles National Forest within the Salt Creek IRA in Alternative 2. This acreage is being proposed for RW instead. The management of CB is for the recovery of the at risk species that resides in that area. All management activities need to be beneficial or at least neutral to the species. Prohibiting mechanized/motorized activities in RW should be beneficial. However, dispersed camping (as allowed in RW, but prohibited in CB) could increase disturbance to individuals and their habitat.

### **Alternative 3 - Recommended Wilderness Emphasis**

There would be a significant increase in acres of RW, with a decrease in acres of BC, BCMUR, BCNM, DAI, CB, and no change in acres of EW in Alternative 3. Most lands in the planning area would become RW. This alternative significantly decreases the opportunity for human disturbance by reducing or prohibiting the use of motorized access and the use of mechanized tools/equipment. More primitive types of recreation would be permitted. Decreased use of roads/trails with motorized and mechanized equipment (i.e. mountain bikes) could further improve watershed conditions, reduce soil compaction and decrease habitat fragmentation. There should be fewer opportunities for non-native plant and wildlife species introduction with decreased access into the national forest. The decrease in motorized and mechanized access and

use should be a greater benefit to wildlife within the IRAs when compared to Alternatives 1, 2, and 2a.

Management of wildlife improvements, wildlife, and T&E species recovery actions (including the removal of non-native species) would continue in all areas where it is appropriate and consistent with law and policy. Recovery actions would focus on activities compatible with the Wilderness Act including the potential to use motorized access if necessary to support species recovery consistent with wilderness objectives. Activities conducted by state/federal wildlife agencies such as the California Department of Fish and Wildlife and the US Fish and Wildlife Service would continue under RW.

It is possible that people may shift their recreational activities into specific areas where their preferred activity is still allowed. This may put pressure on habitats outside of and immediately around the more restrictive land use zone and may cause some impacts to wildlife and habitat in those areas from increased use. Animal behavior could be disrupted or displacement of individuals or portions of a population could occur as a result of this shift in use. Animals could temporarily flee the area or the area could become abandoned. Thus individuals and habitats in more restrictive land use zones could experience improved habitat qualities while individuals in less restrictive land use zones could experience decreased habitat qualities.

There is a reduction in acreage of CB (King Creek) on the Cleveland National Forest in Alternative 3. This acreage is being proposed for RW instead. This CB is located within the Sill Hill IRA and also within the King Creek RNA. Although the management of RW is different than the management of CB, this area will continue to be managed as a RNA in conjunction with the RW zoning. The management of the area as a RNA is for research and the monitoring of natural forest processes. Continuing to manage the area as a RNA should be very beneficial to the species-at-risk in this area as it provides an additional level of protection beyond the land use zoning alone.

### **Species Specific Effects for ESA listed TEPC Wildlife and Critical Habitats**

Chapter 3 Table 11 shows the ESA listed TEPC species that have occurrences within the 37 IRAs. Animal occurrences were considered overlapping with an IRA if there was knowledge and/or data that showed an individual within the boundary. It is possible that an animal is more widespread than is indicated from the limited GIS data available and may actually occur on other IRAs. However, for analysis consistency, only regional and national databases such as FWS GIS, CNDDB and NRIS databases were used.

The species that have known occurrences within the 37 IRAs include: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, Conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow legged frog, Santa Ana sucker, southwestern willow flycatcher, southern steelhead (southern California DPS), peninsular bighorn sheep, and vernal pool fairy shrimp.

Species whose occurrences do not overlap with any of the 37 IRAs are not affected by the proposed alternatives. Therefore, there are no effects to the following species: California least tern, desert tortoise, giant kangaroo rat, Hermes Cooper butterfly, Kern primrose sphinx moth, Longhorn fairy shrimp, marbled murrelet, Quino checkerspot butterfly, San Bernardino kangaroo rat, San Joaquin kit fox, Smith blue butterfly, southern steelhead (South/Central California coast DPS), Stephen's kangaroo rat, southern sea otter, Stellar sea lion, tidewater

goby, unarmored threespine stickleback, western yellow billed cuckoo and western snowy plover. These species will not be discussed any further in this document.

Chapter 3 Table 12 shows the ESA designated critical habitats that overlap with the IRAs within the analysis. The following species have critical habitats that overlap with the 37 IRAs: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow-legged frog, San Bernardino kangaroo rat, Santa Ana sucker, southwestern willow flycatcher, southern steelhead (Southern California DPS), southern steelhead (South/Central California Coast DPS), and vernal pool fairy shrimp.

#### Arroyo toad (*Anaxyrus californicus*)

Arroyo toad (ARTO) occurs on all four southern California national forests. They are found in the Barker Valley, Cedar Creek, Caliente, Diablo, Eagle Peak, Fish Canyon, Trabuco, Juncal, Salt Creek, Sespe-Frazier, Cucamonga C, Madulce-Buckhorn, and Upper San Diego River IRAs (Table 11). Toads would continue to be impacted in the same manner as they currently are in Alternative 1. Alternatives 2 and 2a should result in beneficial effects to toads. Effects include fewer impacts to individuals within the occupied IRAs as compared to Alternative 1 due to more restrictions on motorized access and mechanized use. There would be less soil compaction and erosion and an improved watershed condition. There would also be less upland habitat fragmentation from decreased road use. Alternative 3 would result in the least amount of impacts to ARTO occurrences within the analysis IRAs due to the significant reduction in motorized access and mechanized use. There should be the least amount of soil compaction and erosion as well as the greatest potential for watershed improvement. There should also be the least amount of habitat fragmentation from little to no road use/access. The four national forests should still be able to maintain, enhance and treat habitats for the recovery of arroyo toads under all alternatives. Recovery actions should continue as appropriate and needed.

Table 65 shows the acres of ARTO critical habitat that overlap with the analysis IRAs. On the Angeles National Forest, ARTO critical habitat occurs in the Fish and Salt Creek IRAs. On the Cleveland National Forest, ARTO critical habitat occurs in Barker Valley, Caliente, Cedar Creek, Eagle Peak, No Name, Sill Hill, Trabuco, and Upper San Diego River IRAs. On the Los Padres National Forest, critical habitat occurs on Dry Lakes, Juncal, Madulce Buckhorn and Sespe-Frazier IRAs (Table 12). Alternative 1 results in no effects to critical habitat as this is the existing condition. Under Alternative 2, critical habitat acres are in more restrictive land use zones (i.e., BC changes to BCNM or BCNM changes to RW). Effects of Alternative 2 include reduced habitat disturbance, reduced habitat fragmentation, increased water quality and reduced erosion and sediment into riparian habitats. An improvement in watershed condition class would help protect the primary constituent elements (PCE) of critical habitat for ARTO. There are no changes in the amount of critical habitat acres available nor are there any changes in primary constituent elements.

On the Angeles National Forest, there is a reduction in acres of CB (Castaic CB – Salt Creek IRA), with an increase in acres of RW under Alternatives 2, 2a, and 3. This land use zone change may result in primarily positive effects for ARTO individuals and critical habitat. Critical biological zones are for managing at-risk species. All management activities need to be beneficial or at least neutral to ARTO. Activities in this zone are typically planned with the species' recovery in mind. Although RW is a more restrictive use zone, the management of

wilderness characteristics is the emphasis. Prohibiting mechanized/motorized activities would be beneficial to critical habitat. However, dispersed camping (as allowed in RW but prohibited in CB) may increase habitat disturbance, especially in riparian habitats. Although it is possible that an individual could be disturbed as a result of dispersed camping, the benefits of a reduction in vehicle disturbance outweigh the increase in foot disturbance. Vegetation management would be allowed in RW, which may be beneficial to maintaining critical habitat primary constituent elements. Prohibiting the collection of forest products, communication sites and mineral extractions in RW would be beneficial to ARTO critical habitat (P. Johnson, pers. communication 2012).

#### California condor (*Gymnogyps californicus*)

California condors (CACO) occur on the Angeles and Los Padres National Forests in the Antimony, Cuyama, Diablo, Dry Lakes, Fish Canyon, Fox Mountain, Salt Creek, Madulce Buckhorn, Machesna Mountain, Sawmill-Badlands, and Sespe-Frazier IRAs. Condors occur in other places on the Angeles National Forest (Contractor's Point), and San Bernardino National Forest (Keller Peak); however, these areas do not overlap with an IRA included in this analysis.

Under Alternative 1, individual condors would continue to be impacted in the same manner as they are currently. Under Alternatives 2, 2a, and 3, there should be beneficial effects from the reduction in acres of BC, BCMUR, BCNM and DAI. Effects include less interaction and disturbance from people, and reduction in trash and contaminated carcasses as a result of a reduction in road access/use. There should also be a reduction in habitat fragmentation from roads leading to an improvement in overall habitat conditions. Under Alternative 3, there should be the least amount of motorized and mechanized disturbance. Although the recovery plan for the California condor does not recommend the designation of additional wilderness areas as a means of promoting recovery, wilderness recommendation could preclude wind energy development and their potential impacts, which would be beneficial to the birds.

Table 65 shows the acres of CACO critical habitat that overlaps with analysis IRA boundaries. On the Angeles National Forest, critical habitat occurs in the Sespe-Frazier IRA. On the Los Padres National Forest, critical habitat occurs in Fox Mountain, Machesna Mountain, Madulce Buckhorn, Sawmill-Badlands, and Sespe-Frazier IRAs (Table 65). Alternative 1 has no changes to land use zones and thus effects to critical habitat is the same as currently occurs. There is a reduction of acres of BC and BCMUR in Alternatives 2, 2a, and 3. The reduction in new roads and road use would be a benefit to critical habitat. This would reduce habitat fragmentation and increase water quality by reducing erosion and sediment from these roads. There are no changes to acres of CB under all alternatives, which would be beneficial in maintaining the quality of critical habitat within the Sespe-Frazier and Madulce-Buckhorn IRAs. There would be no change in the amount of critical habitat acres are available nor there any changes in primary constituent elements. Recovery actions for CACO would still be continued as appropriate and consistent with law and policy under all alternatives.

#### California red-legged frog (*Rana draytonii*)

California red-legged frog (CRLF) occurrences overlap with the Diablo, Juncal, Madulce-Buckhorn and Garcia Mountain IRAs on the Los Padres National Forest. Under Alternative 1 frogs would continue to be impacted in the same manner as they are currently. Frog mortality as a result of vehicle traffic is a subject of intensive monitoring currently conducted by the Los Padres National Forest. Alternatives 2, 2a, and 3 would restrict road access into the IRAs, which



should result in reduced potential mortalities from vehicles. These alternatives would also result in reduced soil sedimentation into riparian habitats and an improved water conditions for frogs. Sediment deposition into breeding ponds and upon egg masses is thought to be a major factor in the decline in red-legged frog populations in southern California. Natural sediment deposition that filled in breeding pools across the Santa Ynez drainage after fires has been an issue, particularly after large fires such as the 2007 Zaca Fire. Improving the quality of habitats and improving water quality by restricting the type of access/use would allow frogs to potentially expand along existing habitat. Restrictive land uses would also minimize the potential spread of non-native species and diseases. The recovery actions for the CRLF would continue under all four alternatives.

Approximately 60,750 acres of CRLF critical habitat overlaps the Red Mountain, Sespe-Frazier, Diablo, Dry Lakes, Garcia Mountain, Juncal, Machesna Mountain, Madulce Buckhorn, Tequepis and White Ledge IRAs on the Angeles and Los Padres National Forests (Table 65). Alternative 1 has no changes to land use zones. Effects for CRLF critical habitat are the same as the existing condition. Alternatives 2 and 2a would zone critical habitat acres in more restrictive land use zones. Alternative 3 would zone the most the most critical habitat acres into restrictive land use zones, primarily RW. These zone changes could be beneficial as it would reduce the amount of habitat disturbance by decreasing access and use in the area. There would be decreased habitat fragmentation, soil compaction and erosion (from driving). It is expected that under all four alternatives, the national forests would still be able to maintain, enhance and treat critical habitats for the recovery of CRLF. There would be no changes in the amount of critical habitat acres available, nor are there any changes in primary constituent elements.

#### Coastal California gnatcatcher (*Polioptila californica californica*)

Coastal California gnatcatchers (CAGN) have been seen in several southern California national forests. However, their occurrences only overlap with IRAs on the Cleveland National Forest (Cedar Creek, Cold Water, Eagle Peak, No Name, Sill Hill, Upper San Diego, and Trabuco). CAGN would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would result in beneficial effects from the reduction of acres BC, BCMUR, and BCNM. Also under Alternatives 2, 2a and 3, there is an increase in acres of RW, with the greatest increase in acres of RW in Alternative 3. This would result in less physical and noise disturbance to birds as a result of the reduction in road access/use. A reduction in habitat fragmentation from roads would result in overall improvement in coastal sage scrub habitat quality. Beneficial effects may also include a reduction in the potential for frequent road-side fires, which have had devastating effects on coast sage scrub.

Critical habitat (4,941 acres) occurs in the Cedar Creek, Cold Water, Eagle Peak, No Name, Sill Hill, Trabuco, and Upper San Diego IRAs (Table 65). Alternative 1 results in no change to CAGN critical habitat. Alternatives 2 and 2a would result in some critical habitat being in more restrictive land use zones. The effect would be a decrease in public motorized access of lands that become BCMUR. Administrative use of vehicles is allowed in BCMUR, but there would be no public access. There should be a reduction in the creation of unauthorized roads/trails, and thus less habitat fragmentation. Alternative 3 would result in most of the critical habitat acres being located within RW. An increase in acres of RW in the San Diego River area would be beneficial to gnatcatchers. The area is not very accessible and the most recent management activity has been closing of unauthorized routes (K. Winter, pers. Communication, 2012). Continuing to remove unauthorized routes is consistent with the Wilderness Act and would

contribute to species recovery, as well as enhance the quality of the critical habitat. There would be no change in the amount of critical habitat acres available, nor any changes in primary constituent elements. Under all four alternatives, the national forests would still be able to maintain, enhance and treat habitat for recovery.

Conservancy fairy shrimp (*Branhinecta conservatio*)

Conservancy fairy shrimp has known occurrences that overlap with the Sespe Frazier IRA on the Los Padres National Forest. The species also has 24,997 acres of designated critical habitat within the Sespe-Frazier IRA. Conservancy fairy shrimp would continue to be impacted in the same manner as they are currently under Alternative 1. Effects from Alternatives 2 and 2a include fewer disturbances to individuals, less soil compaction and habitat disturbances as a result of reduced motorized access and use. Effects from Alternative 3 include greater protection of critical habitat and occurrence areas due to the significant increase in acres of RW. There should be less motorized and mechanized use/access under Alternative 3. Alternative 3 should result in the most critical habitat acres being protected for primary constituent elements. The LPNF is expected to be able to continue to maintain, enhance and/or treat critical habitat acres for the recovery of fairy shrimp as necessary under all four alternatives

Laguna mountain skipper (*Pyrgus ruralis lagunae*)

Laguna mountain skippers have occurrences and designated critical habitat (206 acres) on the Cleveland National Forest in the Barker Valley IRA. Laguna mountain skippers would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would zone occupied and critical habitat acres to more restrictive land use zones; however, the effects are similar to Alternative 1. There would be a reduction in acres of BC, BCNM, BCMUR, no change to acres of DAI and a significant increase in acres of RW. Although restrictive land use zoning benefits species and critical habitat in theory, the skipper and its critical habitat are already protected. Currently there is no vehicular access into the area (Mendenhall Valley). Vehicular access is controlled by private landowners, so the effect is similar to restrictive land use zones. The skipper's primary host plant, *Horkelia clevelandii* actually does very well with disturbance and can colonize open areas, so more restrictive land use zones would not result in increased population expansions. However, there is some thought that the larger (perhaps older) plants are actually the best habitat for the skipper (K. Winter pers. Comm. 2012), so more restrictive land use zones may actually benefit individual host plants should the area no longer continue to receive protection through private ownership. There would be no changes in the amount of critical habitat acres available or any changes in primary constituent elements. Under all four alternatives, the national forests would still be able to maintain, enhance and treat habitat for recovery.

Least Bell's vireo (*Vireo bellii pusillus*)

Least Bell's Vireo (LBV) occurs on all four southern California national forests but occurrences only overlap with the Diablo, Juncal and Madulce-Buckhorn IRAs on the Los Padres National Forest. Approximately 993 acres of critical habitat overlap these IRAs (Table 65). LBVs would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would result in a reduction of acres of BC, BCMUR, an increase in acres of BCNM and no changes to acres of CB in the Juncal and Madulce-Buckhorn IRAs. Alternative 3 would result in the greatest increase in RW. Effects from reduction in road access/use would be less disturbance (physical and noise) to individuals within the IRAs. This is

particularly important during the nesting season, when individuals compete for territories through song. There would also be fewer flushing of breeding individuals and fewer physical disturbances of nests. Effects also include a reduction in habitat fragmentation, decreased soil compaction, increased riparian habitat quality and reduced erosion and sediment into riparian habitats. Alternative 3 would result in the least amount of impacts of all alternatives due to the significantly limited motorized access and mechanized use. Critical habitat acres would be the least disturbed. There would also be the least amount of habitat fragmentation from little to no road use/access. Under all four alternatives, the national forests would still be able to maintain, enhance and treat habitats for the recovery of vireos. Recovery actions will continue as appropriate and consistent with law and policy.

#### Mountain yellow legged frog (*Rana muscosa*)

Mountain yellow legged frogs (MYLF) occur on the Angeles and San Bernardino National Forests but occurrences only overlap with the Cucamonga B, Cucamonga C and Raywood Flats B IRAs on the San Bernardino National Forest. Thirty-two acres of critical habitat overlap the Cucamonga B and Cucamonga C IRAs. MYLFs would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2 and 2a do not result in more restrictive land use zones for all IRAs. In Cucamonga C, there are no changes between Alternatives 1 and 2 or 2a, thus effects are the same. In Cucamonga B and Raywood Flats B, there is a shift toward more restrictive land use zones. Effects include fewer impacts to frogs than Alternative 1 due to limited motorized access and mechanized use. There would be less soil compaction and erosion and an improved stream/creek condition, which is very important for this highly aquatic frog. There would also be less habitat fragmentation from decreased road use. In Alternative 3, there is a reduction in acres of BC, BCNM and an increase in acres of RW. Improving the quality of stream bank habitats and improving water quality by restricting the type of access/use would allow frogs to potentially expand along existing habitat.

Restrictive land uses would also minimize the potential spread of non-native species and diseases. The spread of the amphibian fungal pathogen, *Batrachochytrium dendrobatidis* (*Bd*) (a.k.a. chytrid) through contaminated footwear has contributed to massive deaths of amphibians including mountain yellow-legged frogs. By minimizing stream/creek access, the spread of chytrid could be significantly decreased. An improvement in watershed condition class would help protect the primary constituent elements (PCE) of critical habitat for MYLF. There are no changes in the amount of critical habitat acres available, nor are there any changes in primary constituent elements. Under all alternatives there would be no changes to recovery actions for MYLF including non-native fish removal, as this action is under the jurisdiction of the California Department of Fish and Wildlife.

#### Santa Ana Sucker (*Catostomas santanae*)

Santa Ana suckers (SASU) have occurrences on the Sespe-Frazier IRA, which occurs on the Los Padres National Forest. Designated critical habitat is adjacent to, but does not overlap with, the Westfork and West Fork IRAs on the Angeles National Forest. SASU individuals would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2 and 2a would result in an increase in more restrictive land use zones, and a decrease in motorized use/access. There should be fewer impacts to individuals within the Sespe-Frazier IRA than Alternative 1 due to limited motorized access and mechanized use, but more impacts than Alternative 3. There would be less stream bank soil compaction and erosion

and an improved stream condition. There would also be less habitat fragmentation from decreased road use. Under Alternative 3, there would be the least amount of impacts to SASU occurrences of all alternatives due to the significant reduction in motorized access and mechanized use. Effects would be the least amount of soil compaction and erosion, as well as the greatest potential for watershed improvement. There would also be the least amount of habitat fragmentation from little to no road use/access. Under all four alternatives, the national forests would still be able to maintain, enhance and treat habitat for the recovery of suckers. Recovery actions would continue as appropriate and needed.

San Bernardino kangaroo rat (*Dipodomys merriami parvus*)

San Bernardino kangaroo rat (SBKR) is known to occur on the San Bernardino National Forest. However, there are no occurrences that overlap with any of the analysis IRAs. There is approximately 45 acres of critical habitat designated in the Cucamonga B IRA. SBKR individuals would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2 and 2a would decrease acres of BC and DAI, and increase acres of BCNM. There should be less habitat disturbance as a result of decreased motorized use/access relative to Alternative 1. There should be decreased soil compaction and less opportunity for invasive plant introduction. Although effects would continue across the increased acres of BCNM, these activities are less disturbing. The activity with the most potential disturbance would be mountain biking, which could destroy SBKR burrows and their travel corridors. Alternative 3 would result in even greater protection to critical habitat as most acres will be zoned RW. This would eliminate motorized and mechanized use in this portion of critical habitat, which would further minimize habitat fragmentation and decrease soil compaction. There should be decreased opportunities for non-native plant introductions, which would help maintain primary constituent elements. There are no changes in the amount of critical habitat acres available, nor are there any changes in primary constituent elements under any of the alternatives. With all four alternatives, the national forests would still be able to maintain, enhance and treat habitat for the recovery.

Southwestern willow flycatcher (*Empidonax trailii extimus*)

Southwestern willow flycatchers (SWWF) and migrant flycatchers have been seen on all four southern California national forests. However, occurrences only overlap with the Sespe-Frazier IRA on the Los Padres National Forest and Raywood Flats IRA on the San Bernardino National Forest. Observations of migrant willow flycatchers (*E. trailii*) have been noted in Cuyama, Pyramid Peak A, Sespe-Frazier, Red Mountain and Tule IRAs on the LPNF, and multiple locations on the CNF and SBNF. Some of these individuals could be southwestern willow flycatcher individuals, but it is unknown from the data available. Approximately 60 acres of critical habitat occurs on the Raywood Flats B IRA (Table 65). SWWF individuals would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would result in a decrease in acres of BC, BCMUR, no change in acres of CB, DAI, EW, and an increase in acres of RW. However, Alternatives 2 and 2a increase acres of BCNM, while Alternative 3 decreases acres of BCNM. Effects of reduced road use/access would be beneficial. There would be less physical disturbance and noise disturbance to birds. Even though there is an increase in acres of BCNM in Alternatives 2 or 2a, this zone is more restrictive of use than the uses allowed in Alternative 1.

Non-motorized use of riparian areas is less disturbing than motorized use as it is less noisy. The reduction in noise would be beneficial to birds during the breeding season as they communicate with sound. Noise reduction would also reduce the likelihood of birds being flushed from nests. Reduced vehicular access should also reduce habitat fragmentation, increase water quality and reduce erosion and sediment into riparian habitats. There should be fewer opportunities for the introduction of non-native species such as salt cedar and giant reed (i.e. *Tamarisk* and *Arrundo* spp.) that reduce habitat quality for birds. Having critical habitat within more restrictive land use zones should help improve habitat quality by minimizing activities in those areas. There are no changes in the amount of critical habitat acres. The forests would be able to continue to maintain, treat and enhance critical habitat acres for SWWF as appropriate and consistent with law and policy under all four alternatives

#### Southern Steelhead (southern California DPS) (*Oncorhynchus mykiss*)

There are two distinct genetic populations of southern steelhead (SOST); the endangered southern California DPS and the threatened south/central California DPS. There are no occurrences or designated critical habitat for threatened south/central California coast DPS in any of the 37 IRAs in this analysis. The endangered southern California DPS occurs on the Cleveland National Forest and on Los Padres National Forest (Dry Lake, Sespe- Frazier IRA). On the Cleveland National Forest, several streams (San Juan, San Mateo, and Trabuco Creeks), although not necessarily perennial, may be important for winter-run steelhead. Additionally, there are at least two “land-locked” steelhead populations in Pauma Creek and San Luis Rey River -West Fork (Barker Valley IRA). These fish are not currently considered steelhead or addressed by NOAA since several dams and water diversions prevent anadromy.

Critical habitat for the southern California DPS also occurs on the Los Padres National Forest. Approximately 22 miles of linear critical habitat occurs on the Los Padres National Forest in the Dry Lakes, Sespe-Frazier and White Ledge IRAs (Table 66). SOST individuals would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2 or 2a would not result in different effects to southern steelhead when compared to Alternative 1, as there is only a 1.54 mile stream habitat decrease in BC and a 1.55 mile stream habitat increase in BCNM. The miles of BCMUR, DAI and EW do not change under any alternatives. Alternative 2 and 2a are the same for steelhead.

Alternative 3 should result in the least amount of individual disturbance and the greatest amount of habitat improvement. Under this alternative, there is a significant increase in acres of RW with a decrease in acres of BCNM, which should minimize mechanized access and use. Decreased access to spawning sites should improve habitat conditions, as well as allow more individuals to reproduce successfully. Alternative 3 should also result in decreased soil compaction, soil erosion along stream banks and improved water quality. Although people may still be able to access streams where southern steelhead occurs, only the least invasive activities are permitted, thus minimizing disturbance to individuals and spawning habitats. There should be no expected change in the miles of critical habitat available as a result of land use zoning. The Cleveland National Forest and Los Padres National Forest are expected to be able to continue to maintain, enhance and/or treat critical habitat acres for the recovery of southern steelhead as necessary under all four alternatives.

### Vernal pool fairy shrimp (*Branhinecta lynchi*)

Vernal pool fairy shrimp occurrences overlap with the Sespe-Frazier IRA on the Los Padres National Forest. Approximately 24,977 acres of critical habitat occurs on the Sespe-Frazier IRA. Vernal pool fairy shrimp individuals would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2 and 2a propose a reduction in acres of BC, BCMUR, and DAI with an increase in acres of BCNM. Effects of decreased road access and use include fewer disturbances to individuals compared to Alternative 1. This should result in less soil compaction, soil erosion, and decreased potential for habitat fragmentation than Alternative 1 but more than Alternative 3. There could be some effects from increased acres of BCNM; however, impacts from foot traffic should be less damaging than vehicular traffic.

Alternative 3 results in the least amount of disturbance and individual mortalities when compared to Alternatives 1, 2, and 2a due to the significant reduction in motorized access and the increase in RW. This alternative also results in the least potential for habitat fragmentation. The total critical habitat acres for fairy shrimp will not change between alternatives. Alternatives 2 and 2a should result in some critical habitat acres being more protected from ground disturbance and fragmentation than Alternative 1. Alternative 3 should result in most critical habitat acres being protected and maintained for quality. The Los Padres National Forest is expected to be able to continue to maintain, enhance and/or treat critical habitat acres for the recovery of fairy shrimp as necessary under all four alternatives.

### **Determinations of Effects for Threatened or Endangered Wildlife Species and Designated Critical Habitat**

Determinations are based on the Biological Assessment (BA) and are subject to change after informal consultation with the National Marine Fisheries Service. The BA is available online as part of the project record. The Fish and Wildlife Service concurred with the determinations for the species within their jurisdiction by letter on November 14, 2013.

Land use zone changes on the four southern California national forests will have *no effect* on the following species and/or their designated critical habitats: California least tern, desert tortoise, giant kangaroo rat, Hermes Cooper butterfly, Kern primrose sphinx moth, Longhorn fairy shrimp, marbled murrelet, Quino checkerspot butterfly, San Joaquin kit fox, Smith blue butterfly, southern steelhead (South/Central California coast), Stephen's kangaroo rat, Stellar sea lion, southern sea otter, blunt nose leopard lizard, tidewater goby, unarmored threespine stickleback, western yellow billed cuckoo and western snowy plover.

#### *Rationale for Determination:*

- There are no occurrences of the above listed species within any of the 37 IRAs analyzed in this document.
- There is no designated critical habitat that overlaps with any of the 37 IRAs analyzed in this document.
- There are no occurrences of the above candidate species within any of the 37 IRAs analyzed in this document.

Land use zone changes on the four southern California national forests *may affect, but not likely to adversely affect – possible beneficial effects*, the following species and/or their designated

critical habitats: arroyo toad, California condor, California red-legged frog, coastal California gnatcatcher, Conservancy fairy shrimp, Laguna mountain skipper, least Bell's vireo, mountain yellow legged frog, southwestern willow flycatcher, southern steelhead (southern California DPS), peninsular bighorn sheep, San Bernardino kangaroo rat, Santa Ana sucker, and vernal pool fairy shrimp.

*Rationale for Determination:*

- There are occurrences for the Laguna mountain skipper, Conservancy fairy shrimp, vernal pool fairy shrimp, southern steelhead (southern California DPS), mountain yellow legged frog, California condor, arroyo toad, southwestern willow flycatcher, least Bell's vireo, California red-legged frog coastal gnatcatcher and peninsular bighorn sheep within some of the 37 analysis IRAs.
- There is designated critical habitat for the Laguna mountain skipper, Conservancy fairy shrimp, vernal pool fairy shrimp, southern steelhead (southern California DPS and south/central California coast DPS), mountain yellow legged frog, California condor, arroyo toad, southwestern willow flycatcher, least Bell's vireo, California red-legged frog, Santa Ana sucker, San Bernardino kangaroo rat, and coastal gnatcatcher within some of the 37 analysis IRAs.
- Alternative 2, 2a and 3 would result in increased occupied and critical habitat acres being managed with more restrictive land use zones which should provide benefits to species and habitats.
- The reduction in motorized use of habitats should help improve over all habitat qualities (soil, watershed, fragmentation) and help protect primary constituent elements which should provide benefits to species and habitats.
- There should be a reduction of negative effects to wildlife individuals in the form of decreased disturbances which should provide benefits to species and habitats.

Consultation Requirements

Informal Consultation was conducted with USFWS due to the “may affect, not likely to adversely affect – possible beneficial effects” determinations. Based on the proposed action and analysis of effects, Section 7 Formal Consultation is not required.

Effects to Region 5 Sensitive Wildlife Species

Table 67 shows the known occurrences of the R5 sensitive wildlife species that overlap with the 37 IRAs. Many of these species occur in numerous places within the four southern California national forests. It is possible that an animal is more widespread than is indicated from the GIS data available and may actually occur on other IRAs. Occurrence information was gathered from CNDDDB and NRIS during the preparation of this analysis (2012), and may not reflect more current information and/or information that were not available (i.e. uploaded) in these two databases. Due to the number of sensitive species, animals were grouped by major animal type: amphibian, bird, fish, insect, mammal, and reptile. The mammal group was further broken down into subgroups: rodents, bats, and ungulates.

**Table 67. R5 Sensitive Wildlife Species Occurrence by Forest and IRA**

R5 Sensitive Wildlife Species			
Common Name	Latin Name	Forest Occurrence	IRA Occurrence
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	ANF, CNF, LPNF, SBNF	Cucamonga B
Arroyo chub	<i>Gila orcutti</i>	ANF, CNF, LPNF, SBNF	Sespe-Frazier
Partially armored threespine stickleback	<i>Gasterosteus aculeatus microcephalus</i>	SBNF	Unknown
Large-blotched ensatina	<i>Ensatina eschscholtzii klauberi</i>	CNF, SBNF	Unknown
Yellow-blotched ensatina	<i>Ensatina eschscholtzii croceater</i>	ANF, LPNF, SBNF	Sawmill-Badlands
San Gabriel Mountain slender salamander	<i>Batrachoseps gabrieli</i>	ANF, SBNF	Cucamonga B
Tehachapi slender salamander	<i>Batrachoseps stebbinsi</i>	LPNF	Unknown
Southwestern pond turtle	<i>Emys marmorata pallida</i>	ANF, CNF, LPNF, SBNF	Cedar Creek, Dry Lakes, Fox Mountain, Ladd, Machesna Mountain, Sespe-Frazier, Trabuco, West fork
California legless lizard	<i>Aniella pulchra</i>	ANF, CNF, LPNF, SBNF	Antimony, Cuyama, Sespe-Frazier
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>	ANF, CNF, LPNF, SBNF	Pyramid Peak A
Southern rubber boa	<i>Charina umbratica</i>	ANF, LPNF, SBNF	Antimony, Sawmill-Badlands
Coastal rosy boa	<i>Lichanura trivirgata rosafusca</i>	ANF, CNF, SBNF	Pyramid Peak A, Trabuco
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	ANF, SBNF	Cucamonga B
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	CNF, SBNF	Trabuco
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirubra</i>	ANF, SBNF	Unknown
San Diego mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	CNF, SBNF	Barker Valley, Sill Hill, Upper San Diego River
Two-striped garter snake	<i>Thamnophis hammondi</i>	ANF, CNF, LPNF, SBNF	Barker Valley, Cucamonga B, Cucamonga C, Diablo, Trabuco, Juncal, Pyramid Peak A, Sespe-Frazier, West Fork
Foothill Yellow-legged frog	<i>Rana boylei</i>	ANF, LPNF	Dry Lakes, Juncal, Sespe-Frazier, Tequepis
Northern goshawk	<i>Accipiter gentilis</i>	ANF, LPNF, SBNF	Unknown



R5 Sensitive Wildlife Species			
Common Name	Latin Name	Forest Occurrence	IRA Occurrence
California spotted owl	<i>Strix occidentalis occidentalis</i>	ANF, CNF, LPNF, SBNF	Antimony, Barker Valley, Cucamonga B, Fish Canyon, Fox Canyon, Garcia Mountain, Madulce-Buckhorn, Raywood Flat B, Spoor Canyon, Trabuco, White Ledge
Bald eagle	<i>Haliaeetus leucocephalus</i>	ANF, CNF, LPNF, SBNF	Barker Valley
American peregrine falcon	<i>Falco peregrinus anatus</i>	ANF, CNF, LPNF, SBNF	Unknown
Willow flycatcher (migrant)	<i>Empidonax traillii</i>	LPNF, SBNF	Pyramid Peak A, Red Mountain, Tule, Sespe-Frazier
San Diego cactus wren	<i>Campylorhynchus bruneicapillus sandiegense</i>	CNF, SBNF	Pyramid Peak A
Brown Pelican	<i>Pelicanus occidentalis</i>	LPNF	Unknown
Swainson's Hawk	<i>Buteo swainsoni</i>	ANF, CNF, LPNF	Unknown
California leaf-nosed bat	<i>Macrotus californicus</i>	CNF, SBNF	Unknown
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	ANF, CNF, LPNF, SBNF	Pyramid Peak A
Pallid bat	<i>Antrozous pallidus</i>	ANF, CNF, LPNF, SBNF	Pyramid Peak A, Upper San Diego River
Western red bat	<i>Lasiurus blossevillii</i>	ANF, CNF, LPNF, SBNF	Pyramid Peak A
Los Angeles little pocket mouse	<i>Perognathus longimembris brevinasus</i>	ANF, CNF, SBNF	Unknown
San Bernardino white-eared pocket mouse	<i>Perognathus alticolus alticolus</i>	ANF, SBNF	Unknown
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus</i>	ANF, SBNF	Raywood Flat B
San Gabriel Mountains bighorn sheep	<i>Ovis canadensis nelsoni</i>	ANF, SBNF	Cucamonga B
Los Pinos chipmunk	<i>Tamias speciosus callipeplus</i>	LPNF	Sawmill-Badlands
Tehachapi white-eared pocket mouse	<i>Perognathus alticola inexpectus</i>	ANF, LPNF	Sawmill-Badlands, Sespe-Frazier, Tule

### Amphibians

Amphibians, such as frogs and toads, spend time in both upland and aquatic habitats during their lifecycle and could be affected directly and indirectly by human use. Other species, such as salamanders, occur primarily in moist substrates in upland habitats with shaded vegetated areas, litter layers that provide soil moisture conditions, or under decaying logs, leaf litter, and rock outcrops.

Water play in occupied streams could dislodge egg masses, trample, and/or disturb tadpoles or newly metamorphosed individuals. Stream use could result in increased sedimentation and reduced

water quality, which affects breeding and survival of amphibians during their aquatic life-stage. Indirect effects of stream use include reduced cover quality along stream-sides and the surrounding upland areas. Recreation in streams is also a large source of non-native species introduction. Fishing bait (e.g. leeches) often escapes into ponds and readily colonizes the entire water body. Small invertebrates such as the New Zealand mud snail and quagga mussel have significantly reduced the habitat quality for amphibians. The spread of the amphibian fungal pathogen, *Batrachochytrium dendrobatidis* (*Bd*) (a.k.a. chytrid), which has contributed to massive deaths of amphibians has been attributed to contaminated footwear.

Foothill yellow-legged frog individuals and their habitat are affected by the alternatives in a similar manner as the federally-listed mountain yellow-legged frog. Although they are two distinct species, their ecology and habitat needs are similar. Amphibians would continue to be impacted in the same manner as they are currently under Alternative 1. Habitat would experience the same disturbances as it is currently does. Alternatives 2 and 2a effects include fewer impacts to frogs within the IRAs than Alternative 1 due to limited motorized access and mechanized use. There is an increase in acres of non-motorized LUZs but activities that occur in this LUZ type are considered to be less disturbing. Indirect effects would be less soil compaction and erosion and improved stream condition, which is very important for this highly aquatic frog. There would also be less habitat fragmentation from decreased road use. Alternative 3 would further improve water quality by restricting access/use allowing frogs to potentially expand along creeks. Alternative 3 would provide the greatest protection to suitable habitat for this species by limiting the type of permitted activities that can occur in the IRAs. This alternative would also minimize the opportunities for non-native species to be accidentally introduced on motorized/mechanized vehicles/equipment.

Alternatives 2, 2a, and 3 are determined to have beneficial impacts to sensitive amphibian species.

### *Birds*

Some bird species (e.g., bald eagle, Swainson's hawk, willow flycatcher) are migratory and may occur over multiple habitat types during certain times of the year. Others (e.g. California spotted owl, San Diego cactus wren) are residents, which means they generally occur year-round. Although no known occurrences for northern goshawk, American peregrine falcon, brown pelican and Swainson's hawk have been recorded, suitable habitat for these species is available and it is possible that these birds do have occurrences that overlap with the IRAs but are undocumented. Impacts to sensitive bird species are expected to be temporary and short-term in nature. Adult birds may be temporarily flushed from their nests if disturbed by loud noises. However, it is expected that these species will return to their nests once the disturbance has moved through.

Other impacts to birds would most likely be in the form of habitat disturbance. People, pack animals, permitted livestock, mountain bikes and vehicles could affect species indirectly if they dislodge nests and/or individuals roosting or nesting in lower growing trees and shrubs.

Birds would continue to be impacted in the same manner as they are currently under Alternative 1. Habitat would experience the same disturbances as it currently does. Alternatives 2 and 2a decrease acres of BC, BCMUR, maintain the same acreages of CB, DAI, and EW, slightly increase acres of RW and primarily increase acres of BCNM. Alternative 3 would decrease acres of BCNM while primarily increasing acres of RW. Alternatives 2 and 2a provide increased

habitat protection as compared to Alternative 1. However, Alternative 3 provides the greatest amount of habitat protection by significantly reducing the types of activities that are permitted in the IRAs.

Effects of reduced road use/access would be beneficial to all individuals and habitat types. There would be less physical disturbance and noise disturbance to birds, especially during the nesting season. Alternatives 2, 2a, and 3 would also minimize the opportunities for non-native species to be accidentally introduced on motorized/mechanized vehicles/equipment. Even though there is an increase in acres of BCNM in Alternative 2 and 2a, the reduction of road use/access would result in fewer individuals being flushed/startled from nests. Indirect effects include reduced habitat fragmentation, increased water quality and reduce erosion and sediment into habitat types. Management actions to maintain and enhance habitat for sensitive birds would continue as appropriate. The removal of non-native species (plants and animals) would continue as appropriate.

Alternatives 2, 2a, and 3 are determined to have beneficial impacts to sensitive bird species.

### *Fish*

Santa Ana speckled dace and arroyo chub occur on all four forests; however, they only overlap with individual IRAs (Cucamonga B and Sespe-Frazier, respectively). The partially armored three-spine stickleback most likely does not overlap with any of the 37 IRAs as it is known only on the San Bernardino National Forest in distinct locations. Recreation (i.e. OHV driving, water play, fishing, hiking) in occupied streams could dislodge egg masses, trample, and/or disturb fish. Effects (disturbance) are most likely temporary, as fish will hide when disturbed or detected. Effects to aquatic habitats could result in increased sedimentation and reduced water quality, which affects breeding and survival. Use of streams may reduce the quality of cover immediately near water courses. Building check dams and swimming pools can reduce the quantity of breeding habitat available. Recreation in streams also is a large source of non-native species introduction. Fishing bait (e.g. leeches) often escapes into ponds and readily colonizes the entire water body. Small invertebrates such as the New Zealand snail and quagga mussel have significantly reduced the habitat quality for fish.

Fish would continue to be impacted in the same manner as they are currently under Alternative 1. Streams and ponds would experience the same disturbances as they do currently. Alternatives 2 and 2a effects include fewer impacts to fish within the IRAs than alternative 1 due to limited motorized access and mechanized use. There is an increase in non-motorized LUZ but activities that occur in this LUZ are considered to be less disturbing. Indirect effects would be less soil compaction and erosion and improved stream condition. There would also be less habitat fragmentation from decreased road use. Alternative 3 would further improve water quality by restricting access/use, allowing habitat to potentially recover along creeks. Alternative 3 would provide the greatest protection to suitable habitat for fish by limiting the type of permitted activities that can occur in the IRAs. This alternative would also minimize the opportunities for non-native species to be introduced onto the forest.

Alternatives 2, 2a, and 3 are determined to have beneficial impacts to sensitive fish species.

### *Mammals – ungulates*

San Gabriel Mountains bighorn sheep is the only sensitive ungulate to overlap with an IRA (Cucamonga B). Bighorn sheep are very secretive animals and are rarely seen by the general

public. Although this population of bighorn sheep can be hunted, their population numbers are fairly low. Any effects from use of the national forest on bighorn sheep individuals would most likely be temporary and short-term in nature as these animals can readily evade and hide from people if encountered. Indirect effects would be in the form of habitat fragmentation and changes in habitat quality as a result of forest use. The introduction of non-native plant species such as salt cedar (*Tamarisk* spp.) has significantly changed the cover composition and water availability within suitable habitats.

Bighorn sheep would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a and 3 would result in greater protection to the sheep and its habitat, with Alternative 3 providing greater protection than Alternatives 1, 2 and 2a. The reduction in motorized access and use would be beneficial to individuals by reducing noise and physical disturbance. This is particularly important during the lambing season, when ewes are unable to travel over much distance with young lambs. The decrease in existing road use would also improve habitat fragmentation and minimize the introduction of non-native species. The increase in RW with alternative 3 would provide the greatest amount of protection to individuals and habitats as only the most primitive types of activities will be allowed. Population surveys and research conducted by the California Department of Fish and Wildlife would most likely continue as needed and as available funding permits. The San Bernardino National Forest is expected to be able to continue to maintain, enhance and/or treat suitable sheep habitat as needed to control non-native species, or to enhance habitat by maintaining water sources.

#### *Mammals – rodents*

The Los Pinos chipmunk is predominately diurnal while the Los Angeles little pocket mouse, San Bernardino white-eared pocket mouse, San Bernardino flying squirrel and Tehachapi white-eared pocket mouse are primarily crepuscular or nocturnal. The San Bernardino flying squirrel is an arboreal squirrel while the other four are ground-dwellers. Despite these differences in ecology, all four rodent species are similarly affected by use of the national forest. Encounters between rodents and people are probably short-lived and temporary as rodents can easily flee or hide if disturbed or startled. Individuals can easily avoid an area if disturbed by the presence of people or vehicles/equipment and would most likely return to the area immediately following the disturbance. Effects to their habitat probably have a greater effect on a species' probability of occurring in an area than disturbances to the individual. Vehicles/equipment/people can trample, crush and otherwise disturb or destroy travel corridors and burrows/nests for rodents. For example, an individual rodent may be deprived of its hiding or foraging space when a rock is turned over or a shrub or bunchgrass is crushed. People could accidentally introduce predators (e.g. cats) into the national forests as residences become more common within and adjacent to the national forest boundaries. Non-native plant species such as Malta star thistle (*Tecalote* and *Centaurea* spp.) have significantly changed habitat quality and quantity for rodents by outcompeting native flora. Habitat loss and fragmentation as a result of development placed additional pressures on rodent populations as fewer habitats are available for dispersal.

Rodents would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a and 3 would result in greater protection to rodents and their habitat with Alternative 3 providing the greatest protection when compared to Alternatives 1, 2, and 2a. The reduction in motorized access and use would be beneficial to individuals by physical disturbance to rodent burrows and travel corridors. The decrease in existing road use

would also improve habitat fragmentation and minimize the introduction of non-native species. The increase in acres of RW under Alternative 3 would provide the greatest amount of protection to rodents and their habitats as only the most primitive types of activities will be allowed. This alternative may also slow down future developments and the introduction of predators into their environment.

#### *Mammals – bats*

Four sensitive bats (California leaf-nosed, Townsend's big-eared, pallid, western red) use the four forests for denning, foraging, and breeding sites. Sites may include large mature trees, rocky outcrops, abandoned mines and adits, bridges, buildings and broken tree tops. It is not expected that use of the national forests will affect bats directly through trampling and/or crushing them. Disturbance may occur in the form of flushing individuals or colonies from sites when startled. People or vehicles could disturb hibernacula and/or individuals roosting or nesting when recreating in areas where bats occur.

Other disturbance may occur in the form of habitat disturbance and introduction of diseases. People often enjoy exploring mines, caves and abandoned adits, which may also be sites where bats use. Exploration may cause animals to be disturbed and flushed from sites. People may also spread diseases to bat colonies. White nose syndrome (WNS) is an emergent disease of hibernating bats that has spread from the northeastern to the central United States at an alarming rate (it has not been detected in southern California to date). The disease is named for the white fungus, *Geomyces destructans*, that infects skin of the muzzle, ears, and wings of hibernating bats. Infected bats display abnormal behaviors in their hibernacula, such as movement toward the mouth of caves and daytime flights during winter. These abnormal behaviors contribute to the consumption of stored fat reserves causing emaciation and death. Since the winter of 2007-2008, millions of bats in 19 states have died from WNS. WNS spreads from contaminated footwear of recreationists visiting caves and abandoned mines.

Bats and their habitats would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would result in greater protection to bats and their habitat with Alternative 3 providing the greatest protection when compared to Alternatives 1, 2, and 2a. The reduction in motorized access and use would be beneficial to bat habitat as it would reduce accessibility to sites where bats may roost/nest/hibernate. The increase in acres of RW under Alternative 3 would provide the greatest amount of protection to bats and their habitats as it further restricts the types of activities that will be allowed. It is expected that the four forests would continue to protect and manage bat habitats by preventing access of abandoned mines, caves and adits. Prohibiting access through the installation of bat gates is expected to still occur as needed under all alternatives. The four forests are also expected to be able to continue to maintain and enhance water sources by installing aquatic escape ramps, which prevent bat drowning, where appropriate with zoning.

Alternatives 2, 2a, and 3 are determined to have beneficial impacts to sensitive mammal species.

#### *Reptiles*

Lizards, snakes and turtles occur in a variety of habitat types across the national forests. Some species such as the southwestern pond turtle and two-striped garter snake are aquatic, while the other species can be found in upland habitats such as chaparral and forests under decaying logs, leaf litter, and rock outcrops. Effects include disturbance to individuals from the presence of

people, vehicles, and stock animals. Disturbance can occur in the form of trampling of burrows and travel paths and incidental deaths. For example, an individual reptile may be deprived of its hiding or foraging space when a rock is turned over or a shrub or bunchgrass is trampled or driven over. Most herpetofauna burrow in soft dirt or move into rock crevices or under debris so it is possible that forest users could disturb these areas during their normal activities. Effects also include direct mortality caused by vehicle impacts and loss of individuals due to over collection. Many reptile species are declining due to habitat degradation and introduced invasive species (such as red-eared slider turtle). Reptiles, more than any other animal group, are collected for the pet trade, legally and illegally. Collectors may destroy rock outcrops and denning areas to collect animals, thereby reducing the quantity and quality of habitat for other reptiles left behind. Over- collection may have an effect on a population, especially if the population is small and isolated.

Reptiles and their habitats would continue to be impacted in the same manner as they are currently under Alternative 1. Alternatives 2, 2a, and 3 would result in greater protection to reptiles, with Alternative 3 providing the greatest protection when compared to Alternatives 1, 2, and 2a. The reduction in motorized use would be beneficial to habitat and individuals as it will reduce accessibility to sites and reduce individual mortality and collection. This would also reduce habitat fragmentation. The increase in acres of RW under Alternative 3 would provide the greatest amount of protection as it further restricts the types of activities that would be allowed. It is expected that the California Department of Fish and Wildlife would continue to regulate the collection of reptiles and prevent over collection. The forests are also expected to be able to continue to maintain and enhance habitats for reptiles, where appropriate, with zoning.

Alternatives 2, 2a, and 3 are determined to have beneficial impacts to sensitive reptile species.

#### Effects to Management Indicator Species (MIS)

The four forests have five wildlife MIS (see Chapter 3 Table 14). Arroyo toad, California spotted owl, mountain lion, mule deer and song sparrow all have habitat within some, if not all, of the IRAs within this analysis area. Occurrence information is limited to the available GIS databases so it is possible that animals may be more widespread than indicated. Arroyo toad has been documented in the following IRAs: Barker Valley, Caliente, Fish Canyon, Trabuco, Juncal, Salt Creek, Sespe-Frazier and Cucamonga C. California spotted owl has territories in the following IRAs: Fish Canyon, Trabuco, Antimony, Fox Mountain, Garcia Mountain, Madulce Buckhorn, Spoor Canyon, White Ledge, Cucamonga B, and Raywood Flats B. Song sparrow has been documented in the following IRAs: Red Mountain, Madulce Buckhorn, Sespe-Frazier, and Pyramid Peak. Mountain lion and mule deer most likely occur within parts of all of the analysis IRAs.

Life history and general habitat requirements for MIS are presented in the Species Accounts accompanying the FEIS. Baseline information for each of the MIS is contained in the FEIS (starting on page 123) and in the more detailed MIS accounts (FEIS Appendix B) and is only summarized here. The species accounts are available as part of the project record. These documents are incorporated by reference and the information within them is the basis for the following discussions.

*Arroyo toad (Anaxyrus californicus)*

The arroyo toad was selected as an MIS for low-elevation riparian and aquatic ecosystems. Long-term trends in population abundance, stream occupancy, and habitat condition are expected to reflect the effectiveness of management actions in protecting low-elevation riparian and aquatic habitat from disturbance and habitat degradation. Short-term fluctuations in arroyo toad populations may not indicate the effects of management actions, because toad populations are strongly influenced by weather patterns. However, long-term trends in arroyo toad abundance and habitat will reflect whether management activities and strategies have been successful in improving habitat conditions for the toads and other aquatic and riparian-dependent species that are susceptible to high levels of human disturbance. Refer to the discussion in the previous section on endangered species for a discussion of the effect of the three alternatives on arroyo toads and the designated critical habitat. Under Alternative 1 the quantity or quality of habitat for the arroyo toad would be managed as is currently prescribed in the LMP and thus there would be no change away from or towards the desired condition than currently occurs. Alternatives 2, 2a, and 3 should help habitat quality for arroyo toads, and thus all three alternatives should help move toward the desired condition when compared to the current condition. See the Biological Assessment for any additional discussion relative to the arroyo toad.

*California Spotted Owl (Strix occidentalis occidentalis)*

The California spotted owl was chosen as the MIS for mature, large diameter, high canopy closure conditions of montane conifer forest. A territorial species with large acreage requirements (at least 300 acres of mature forest per pair), the California spotted owl is an indicator of mature conifer forest with a dense, multi-layered canopy (Stephenson and Calcarone, 1999). There are 28 California spotted owl (CASPO) territories that overlap with several of the analysis IRAs. CASPO occurrences and/or habitat can be found in the following IRA: Fish Canyon (Angeles National Forest); Trabuco (Cleveland National Forest); Antimony, Fox Mountain, Garcia Mountain, Madulce Buckhorn, Spoor Canyon, White Ledge (Los Padres National Forest); and Cucamonga B, Raywood Flats B (San Bernardino National Forest). Habitat elements most important to this nocturnal bird species include: 1) dense, mature forest/riparian stands and, 2) woodrats, the birds' primary prey base (Verner et al. 1992). Mature mixed-conifer forest stands and dense riparian habitats where the birds occur, are often where Forest Service facilities (i.e. campgrounds, yellow-post sites, hiking trails) originate or terminate. These are desirable habitat types that may receive higher recreation pressure than other parts of the national forests. Effects may include higher levels of use and extraction of forest products (i.e. fuel wood, pine cones, bracken fern heads, mineral withdrawal, basket weaving material) and the disturbance caused by these activities.

Monitoring the California spotted owl and its habitat will indicate the effectiveness of management activities in achieving maintenance and restoration of this type of montane conifer forest habitat. Experts have been concerned about the viability of the southern California spotted owl population for many years (La Haye et al., 1994, Verner et. al., 1992), and this concern has only increased with the damaging drought, recent wildfires, and rapid development in the mountains. The cumulative effects of these factors further reduce and isolate California spotted owl populations. Refer to the updated species account information available in the project record for contains the updated species account information for CASPO.

Under Alternative 1 the quantity or quality of habitat for CASPO would be managed as currently prescribed in the LMP and thus there would be no change away from or towards the desired condition than currently occurs. Alternatives 2, 2a and 3 are expected to benefit habitat quality for CASPO, and thus all three alternatives are expected to help move toward the desired condition when compared to the current condition.

*Mountain lion (Felis concolor)*

The mountain lion was selected as an MIS to detect the effects of national forest activities and uses on landscape-level habitat fragmentation and habitat linkages. The greatest concern for the long-term health of mountain lion populations on the national forests of southern California is loss of landscape connectivity between mountain ranges and large blocks of open space on private land (Dickson et al., 2005). Factors that adversely affect mule deer also adversely affect mountain lions. Mountain lions prefer areas with solitude, as do mule deer, so disturbances in riparian areas and key deer summer and winter ranges also affect mountain lions. Extensive vehicle access increases the potential for disturbance, poaching, and animal mortality from vehicles. Another threat to the species is the widening of the existing highway system and new highways, both within and outside the national forests, which can create barriers to movement. The national forests have been cooperating in the Missing Linkages Projects lead by the South Coast Wildlands Conservancy. This effort attempts to identify and gain government agency and public recognition and support for maintaining critical landscape linkages. All four southern California national forests are participating in this effort. The LMP desired condition to maintain or improve habitat conditions to sustain healthy lion populations can be supported by activities which benefit healthy deer populations and provide functional travel routes for lions to disperse to other suitable habitats. Fire and fuel management are the main tools intended to implement the objective for providing prey availability.

The mountain lion is the largest carnivore in southern California and requires large core habitat areas, abundant prey, and habitat connectivity between sub-populations. Recent state population estimates range from 2,500 to 5,000 individuals, with an increasing population trend. Mountain lions inhabit forest and shrubland habitats throughout California where deer, their primary prey, are found (CDFG 2005). Mountain lions are found in nearly all habitat types, but particularly require large areas of riparian vegetation and brushy habitats. They are most likely to be found in all 37 IRAs in this analysis. They use natural caves, rocky ledges, and thickets for cover and denning. Lions feed primarily on deer and bighorn sheep when available, but also eat rabbits, hares, coyotes, skunks, rodents, and occasionally domestic animals

Land use zoning can have some effects on mountain lions. Effects include animals shifting their use of the environment to avoid heavily recreated areas; limited dispersal due to lack of undisturbed travel corridors and direct encounters with national forest users. Other effects can be in the form of changes in distribution and abundance of mule deer which could potentially affect long-term population trends for mountain lions. Under Alternative 1 the quantity or quality of habitat for mountain lions would be managed as currently prescribed in the LMP, and thus there would be no change away from or towards the desired condition than currently occurs. Alternatives 2, 2a, and 3 should improve habitat quality for lions, and thus these alternatives are expected to move toward the desired condition when compared to the current condition.



### *Mule Deer (Odocoileus hemionus)*

The mule deer was selected as an MIS for forest health related to vegetation management, roads and associated recreation management. Trends in mule deer populations can be monitored through cooperation with the California Department of Fish and Wildlife through their on-going surveys. Observed changes in mule deer abundance are not due entirely to the effects of Forest Service activities and uses. This lack of a precise cause-and-effect relationship is due to the complex interrelationships among deer herd size, hunting pressure, human developments and roads, and vegetation management practices on private and public lands. The Forest Service recognizes that mule deer population trends in the national forests depend, in a large part, on national forest vegetation and road management activities. Because maintaining suitable mule deer habitat is an important management objective for the national forests of southern California, it is important for the Forest Service to engage in inter-agency monitoring efforts of deer population abundance and habitat conditions. In addition, mule deer can be used to evaluate the effects of the different strategies in the LMP alternatives for vegetation and road management. The LMP desired condition to maintain or improve habitat conditions to sustain healthy deer populations can be supported by retaining oak canopy cover in oak/grasslands and managing chaparral areas near water sources to create irregular shapes to maximize cover and forage opportunities.

Mule deer are currently affected by activities such as human development and disturbance by recreation activities and domestic animals. Several other non-habitat factors, such as hunting, poaching, road traffic, and diseases may affect mule deer population numbers cumulatively. Additionally, the California Department of Fish and Wildlife believes that the lack of habitat disturbance especially from fire has diminished habitat value for deer across much of the state's forested areas, contributing to the overall state decline in mule deer populations ([CDFW FAQs](#)). Under Alternative 1 the quantity or quality of habitat for mule deer would be managed as currently prescribed in the LMP, and thus there would be no change away from or towards the desired condition than currently occurs. Alternatives 2, 2a, and 3 should improve habitat quality for deer, and thus these alternatives should help move toward the desired condition when compared to the current condition by reducing disturbance to both individuals and deer habitat.

### *Song Sparrow (Melospiza melodia)*

The song sparrow was selected as a MIS for riparian areas because its abundance is expected to be responsive to management actions and to indicate trends in the status of the riparian biological community, particularly birds. The song sparrow is identified by California Partners in Flight as a riparian focal species, and is considered one of the best indicators of riparian health in the western U.S., since over 90 percent of song sparrow nests are found in riparian vegetation. Its distribution is defined by the presence of water through the breeding season, becoming scarce where undergrowth is reduced along ephemeral streams (Roberson and Tenney 1993). As the human population continues to grow and the demand for water and recreation opportunities increases, the pressures on riparian habitat will also increase. Song sparrow abundance is negatively correlated with the use of riparian understory habitat for grazing and recreation (Marshall 1948) and positively correlated with the abundance of herbaceous vegetation (Ballard and Geupel 1998). Abundance trends for song sparrow and habitat condition assessments will help indicate whether national forest management is maintaining healthy riparian ecosystems in the face of increasing demand.

As a MIS species, the indicator of management for song sparrows is ground disturbance, spread of invasive species, mortality from collision and altered stream flow regimes. Under Alternative 1 the quantity or quality of habitat for song sparrows would be managed as currently prescribed in the LMP, and thus there would be no change away from or towards the desired condition than currently occurs. Alternatives 2, 2a, and 3 should improve habitat quality for song sparrow, and thus these alternatives should help move toward the desired condition when compared to the current condition by reducing disturbance to both individuals and song sparrow habitat.

## **Botanical Resources**

In this analysis, the two issues related to botanical resource management are: 1) the IRAs provide habitat to a wide range of threatened, endangered and sensitive plant species, and 2) changes in land use zone allocations could influence the types and intensity of projects that could occur in the future. This section addresses the effects on botanical species and their habitat as land use zones (LUZs) are modified across the action alternatives. The botany report (USDA FS 2013a), and the Addendum (USDA FS 2013b) available in the project record) contains more detailed discussions and analyses of effects to botanical resources. Those discussions are summarized here.

### **Effects Common to All Plant Species by Alternative**

#### **Alternative 1 - No Action**

The biological reports in the FEIS project record provide the basis for this evaluation and they are incorporated here by reference. The analyses in those biological reports relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal.

All LUZs would be retained (including Critical Biological) in the 37 IRAs as they were established in the 2006 LMPs. There would be no change to LUZs and baseline conditions for general botanical resources, vegetation communities, botanical diversity, TES species, and designated Critical Habitats.

The ability to manage habitats for botanical resources, including TES plants and their habitats and controlling non-native species, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat Primary Constituent Elements or PCEs). Because of management direction to protect and enhance botanical resources, including rare species, some beneficial effects may occur under Alternative 1.

There would be no change in priority for restoration of unauthorized routes. Watersheds within the 37 IRAs would most likely retain their current Watershed Condition Class; since roads, trails, and unauthorized routes would likely be retained as is; the opportunities to decrease current and future effects by improving watershed conditions would be limited.

In summary, Alternative 1 may:

- Result in continuing or new effects to botanical resources through a continuation of current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits allowed within the LUZs;
- Result in continued or new effects to botanical resources because the ability to improve Watershed Condition Class within the IRAs may be limited where roads and trails exist;
- Result in beneficial effects to botanical resources if funds are available for decommissioning/restoration of unauthorized routes. If negative effects are occurring, they may continue if funds are not available for decommissioning/restoration of unauthorized routes;
- Result in beneficial effects to botanical resources as a result of a continued emphasis for treatments to control, manage, and eradicate non-native species. Treatments would depend on funding availability;
- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity;
- Have the highest potential for the introduction, spread, and establishment of non-native plant and animals species based on the types and acreages of suitable uses allowed. In addition, all unauthorized routes would remain in the current land use zones. Since many of the unauthorized routes would remain in BC, they may have the lowest priority for decommissioning and restoration. Implementation of laws, policies and regulation to control non-native species in existing and recommended wilderness would remain the same. All species specific management including activities to survey, manage, control or eradicate non-native species would continue.

Alternative 1 may result in some negative and some beneficial effects for botanical resources (including TES plants and Critical Habitat) and botanical diversity. If effects are occurring, there would still be management actions available to reduce or eliminate those activities and provide protection for the botanical resources. Since changes would not be made to the transportation system and special use permitted activities would be allowed under the various LUZs, the potential for effects would still exist over the long-term and protection measures may require more effort.

### **Alternative 2 - Proposed Action and Alternative 2a - Preferred Alternative**

While there is a small difference in acreage in BCNM and RW between Alternatives 2 and 2a, the effects to botanical resources are approximately the same. Alternatives 2 and 2a would increase the acres of BCNM and RW and decrease the acres of BC, BCMUR, DAI and CB within the 37 IRAs included in this proposed action. There would be no change in acres of EW. The potential effects to individual plant occurrences (including Threatened, Endangered, and Sensitive species), their habitats, vegetation communities, and botanical diversity may be

reduced compared to Alternative 1. This is a result of fewer activities that would be suitable within BCNM and RW that could result in negative effects to botanical resources.

Beneficial effects to botanical resources are expected to be greater than under Alternative 1. The types of effects associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits, etc. may be reduced or eliminated within BCNM and RW within the IRAs. The reduction or elimination of those activities may result in fewer effects to botanical resources in scope and scale. The projected increase in semi-primitive recreation opportunities and decrease in semi-primitive motorized may also reduce habitat disturbance and other activities that may affect botanical resources.

There may be a greater potential to reduce effects to botanical resources as a result of decommissioning and restoration of unauthorized routes within BCNM and RW. The increase of acres in BCNM and RW may result in an emphasis and priority on restoration projects in those IRAs. Additionally, the potentially reduced risk of non-native species in IRAs under Alternatives 2 and 2a may also result in long-term beneficial effects for native botanical resources.

Alternatives 2 and 2a are also expected to result in improved Watershed Condition Class across the four forests. As such, both aquatic and terrestrial habitats, including botanical resources, may benefit (e.g. by less erosion and sedimentation, improved water quality, etc.) as Watershed Condition Classes improve in the 37 IRAs.

The ability to manage habitats for botanical resources, including TES plants and their habitats, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat PCEs). Specific recovery activities and efforts to maintain species viability and protect occurrences and Critical Habitat (PCEs) would continue to be permitted in RW and BCNM. Actions would focus on those compatible with wilderness management objectives in RW.

The management direction to protect and enhance botanical resources, including rare species, would remain in place and there may be increased emphasis in BCNM and RW where user conflicts with botanical resources may be reduced or eliminated.

With an increase in BCNM zoning, there may be increased potential to retain IRA values, including botanical resource values; this may retain opportunities for future wilderness recommendations.

In summary, compared to Alternative 1, Alternatives 2 and 2a may:

- Reduce potential effects to botanical resources that are associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits allowed within BCNM LUZ and RW;
- Result in improved conditions for botanical resources through the ability to achieve greater improvements in Watershed Condition Class within the IRAs;
- Reduce potential effects to botanical resources through decommissioning more unauthorized routes due to a higher priority for restoration in BCNM and RW zoning;

- Reduce potential effects to botanical resources through the improvement of habitat resiliency which can protect against the establishment and spread of non-native and invasive species due to a reduction of acres disturbed and by continuing to treat invasive species occurrences;
- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity;
- Have more potential to reduce non-native species introductions, establishment, and spread compared to Alternative 1. Compared to Alternative 1, this alternative may have a greater potential to maintain habitat resiliency against establishment of non-natives as the fewest acres have the potential to be disturbed. This is due to more restrictive LUZs that may have fewer roads and trails, reduced activities, under Special Use permits, and a greater emphasis on restoration of unauthorized routes.

Compared to Alternative 1 (and the current conditions), Alternatives 2 and 2a may provide more beneficial effects to botanical resources (including TES species and Critical Habitat) and botanical diversity as a result of lower levels of disturbance based on the types and acres of suitable uses that would be allowed.

### **Alternative 3 - Recommended Wilderness Emphasis**

Alternative 3 would have the greatest increase in acres of BCNM and RW LUZs and the largest decrease in acres of BC, BCMUR, DAI and CB LUZs within the 37 IRAs included in this proposed action. The potential effects to individual plant occurrences (including Threatened, Endangered, and Sensitive species), their habitats, vegetation communities, and botanical diversity may be reduced compared to Alternatives 1, 2, and 2a. This is as a result of fewer activities that would be suitable in RW that could result in negative effects to botanical resources.

The beneficial effects to botanical resources are expected to be the greatest of the four alternatives. The types of effects associated with current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits, etc. may be eliminated or reduced within RW. The reduction or elimination of those activities may result in the fewest effects to botanical resources in scope and scale. The projected increase in semi-primitive recreation opportunities and decrease in semi-primitive motorized may also reduce habitat disturbance and other activities that may affect botanical resources.

The greatest potential benefit to botanical resources (including TES plants, botanical biodiversity, habitats, plant communities, and other rare plants) may occur under Alternative 3 since it would result in the greatest number of acres designated as RW: Approximately 335,173 acres of RW would become unsuitable for a number of different actions and activities.

There may be a greater potential to reduce effects to botanical resources as a result of decommissioning and restoration of unauthorized routes in RW. The highest acreage of RW may also result in an emphasis and priority on restoration projects within those IRAs.

Additionally, the potentially reduced risk of non-native species in IRAs under Alternative 3 may also result in long-term beneficial effects for native botanical resources.

Of the four alternatives, Alternative 3 would be expected to result in the greatest improvements to Watershed Condition Class across the four forests. As such, both aquatic and terrestrial habitats, including botanical resources, may benefit (e.g. by less erosion and sedimentation, improved water quality) within the 37 IRAs as Watershed Condition Class improves.

The ability to manage habitats for botanical resources, including TES plants and their habitats, would not change from current conditions. There would be no change in the Forest Service's ability to implement actions to protect botanical resources (including Critical Habitat PCEs). Specific recovery activities and efforts to maintain species viability and protect occurrences and Critical Habitat (PCEs) would continue to be permitted in RW. Actions would focus on those compatible with wilderness management objectives in RW.

The management direction to protect and enhance botanical resources, including rare species, would remain in place and there may be increased emphasis in RW where user conflicts with botanical resources may be reduced or eliminated. Since Alternative 3 has the highest acreages in RW, it has the greatest potential for beneficial effects to botanical resources as those areas may have a higher priority for protection and restoration.

In summary, compared to Alternatives 1, 2 and 2a, Alternative 3 may:

- Result in the highest potential beneficial effects to botanical resources through the greatest reductions in effects as a result of current and future road/trail use, dispersed and developed recreation activities, energy development, and recreation and non-recreation special use permits in RW;
- Result in the highest levels of beneficial effects to botanical resources by achieving the greatest improvements in Watershed Condition Class within the IRAs;
- Result in the highest potential beneficial effects to botanical resources by reducing effects through decommissioning/restoring the most unauthorized routes due to a higher priority for restoration in RW;
- Result in the greatest reduction of potential effects to botanical resources by improving habitat resiliency against the establishment of invasive species due to the least number of acres disturbed and by continuing to treat invasive species occurrences.
- Provide for continued emphasis for protection of botanical resources, including TES species in Forest Service management actions. This would include activities such as special management considerations to protect PCEs in Critical Habitat and habitat enhancement across all lands that would result in beneficial effects to habitat quality and quantity;
- Have the greatest potential to reduce non-native species introductions, establishment, and spread. This alternative may have the greatest potential to maintain habitat resiliency against establishment of non-native species as the fewest acres have the potential to be disturbed. This is due to more restrictive LUZs that may have fewer roads and trails, reduced activities, under Special Use permits, and a greater emphasis on restoration of unauthorized routes.

Of the four alternatives, Alternative 3 may provide the greatest level of potential beneficial effects for botanical resources (including TES plants and Critical Habitat) and botanical diversity

as a result of lower levels of disturbance based on the types and acres of suitable uses that would be allowed in RW.

### Effects for Threatened and Endangered Plant Species and Critical Habitats

There are four federally-listed plants that occur or have designated Critical Habitat in IRAs.

#### *Poa atropurpurea* (San Bernardino bluegrass)

*Potential Effects:* The potential effects discussion above under “effects common to all plant species” is applicable to any T & E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. For Alternative 1 the viability assessments and effects discussions for this species would not change from those made in the supporting biological documents for the selected alternative in the FEIS. The supporting documents in that Project Record are incorporated here by reference.

Table 68 displays the acres of occupied and Critical Habitat of *Poa atropurpurea* within land use zones across the alternatives. The discussion of effects by alternative follows the table.

**Table 68. Acres of *Poa atropurpurea* Habitat in the Barker Valley IRA (Cleveland National Forest) by LUZ and Alternative**

Land Use Zone	Alternative 1		Alternative 2		Alternative 2a		Alternative 3	
	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat
BCMUR	2.63	145	0	16	0	16	0	16
RW	0	0	2.63	0	2.63	0	2.63	0
BCNM	0	15	0	144	0	144	0	144
<b>Total</b>	<b>2.63</b>	<b>160</b>	<b>2.63</b>	<b>160</b>	<b>2.63</b>	<b>160</b>	<b>2.63</b>	<b>160</b>

In Alternative 1, the 2.63 acres of occupied habitat would retain the BCMUR zoning. Under Alternatives 2, 2a and 3, the occupied habitat would be managed as RW with continued road access subject to the terms of the permit. Overall, management under Alternatives 2, 2a and 3 is expected to be wholly beneficial for *Poa atropurpurea*.

In Alternative 1, the 145 acres of designated Critical Habitat in BCMUR and 15 acres in BCNM would remain the same. In Alternatives 2, 2a, and 3, only 16 acres would remain in BCMUR and the remaining 144 acres would change to BCNM.

If effects are occurring to *Poa atropurpurea* plants and/or the PCEs of the designated Critical Habitat, they may be reduced under Alternatives 2, 2a, and 3 because of the reduction of suitable uses. Management under Alternatives 2, 2a, and 3 is expected to be wholly beneficial for *Poa atropurpurea* Critical Habitat.

A recovery plan and conservation strategy for *Poa atropurpurea* is not yet available. Any activities proposed under a future recovery plan would be allowed under all alternatives.

Special management considerations for protection of the physical and biological features related to geographically specific threats are defined within each Critical Habitat management unit. For the Mendenhall Unit, Special Management Considerations-Mendenhall Unit 13 (within Barker IRA) may be required to: restore, protect and maintain essential features due to threats from

grazing and invasive, non-native plant species. The special management considerations would be implemented under all alternatives.

***Eryngium aristulatum* var. *parishii* (San Diego button celery)**

*Potential Effects:* The potential effects discussion above under “effects common to all plant species” is applicable to any T & E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. This species was not known to occur during the 2006 LMP Revision and was not analyzed or included in consultation with USFWS.

Table 69 displays the acreage of occupied habitat of *Eryngium aristulatum* var. *parishii* within land use zones across the alternatives. In Alternative 1 it is not located within an IRA. In Alternatives 2, 2a and 3, it is located within the Cedar Creek, Eagle Peak, No Name, Sill Hill, and Upper San Diego River Adjacent (New) Area. The discussion of effects across alternatives follows the table.

**Table 69. Acres of occupied habitat of *Eryngium aristulatum* var. *parishii* in the Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River Adjacent (New) Area (Alternatives 2, 2a and 3).**

Land Use Zone	Alternative 1		Alternative 2		Alternative 2a		Alternative 3	
	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat
BC	1/10 acre	0	0	0	0	0	0	0
RW	0	0	1/10 acre	0	1/10 acre	0	1/10 acre	0
<b>Total</b>	<b>1/10 acre</b>	<b>0</b>	<b>1/10 acre</b>	<b>0</b>	<b>1/10 acre</b>	<b>0</b>	<b>1/10 acre</b>	<b>0</b>

In alternative 1, the 1/10 acre of occupied habitat of *Eryngium aristulatum* var. *parishii* is located within the road buffer of Eagle Peak Road and is zoned as Back Country (BC). It is located adjacent to but is not within an IRA or undeveloped area being analyzed in this decision and is not subject to Roadless Rule regulations. Under this alternative the 1/10 acre of occupied habitat would be retained as BC, there would be no changes to activities or land use zones in the occupied habitat. The suitable uses (activities) allowed within BC would be retained. Roadless Rule regulations shown in the IRA/RACR column would not apply.

In Alternatives 2, 2a, and 3 the 1/10 acre of occupied habitat of *Eryngium aristulatum* var. *parishii* is zoned as RW within the Cedar Creek, Eagle Peak, No Name, Sill Hill, and Upper San Diego River Adjacent Area. This is a situation where the Forest included the RW allocation to “capable and available areas adjacent to the settlement IRAs” when inclusion created a more logical wilderness area boundary. The location of the *Eryngium* within this Area is adjacent to but not within an IRA. As such, the population would not be subject to management under the IRA Roadless Rule, it would be managed as Recommended Wilderness. A comparison of the 29 suitable uses (activities) allowed under IRA/RACR verses Recommended Wilderness reveals that 23 would be more restrictive under Recommended Wilderness than under IRA/RACR management. Overall, management under Alternatives 2, 2a and 3 would be wholly beneficial for this species.

Recovery plan activities would be allowed under all alternatives.



***Chlorogalum purpureum* var. *reductum* (Camatta Canyon amole)**

The potential effects discussion above under “effects common to all plant species” is applicable to any T & E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. For Alternative 1, the viability assessment and effects discussions for this species would not change from those made in the supporting biological documents for the selected alternative in the FEIS. The supporting documents in that Project Record are incorporated here by reference.

Table 70 displays the acreage of Critical Habitat of *Chlorogalum purpureum* var. *reductum* within land use zones across the alternatives. The discussion of effects across alternatives follows the table.

**Table 70. Acres of *Chlorogalum purpureum* var. *reductum* Critical Habitat in the Black Mountain IRA**

Land Use Zone	Alternative 1		Alternative 2		Alternative 2a		Alternative 3	
	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat
BC	0	67	0	1	0	1	0	1
BCNM	0	15	0	81	0	81	0	0
RW	0	0	0	0	0	0	0	81
<b>Total</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>82</b>

Occupied habitat is not known to occur in any of the affected IRAs. No effects to occupied habitat would be expected from any of the 4 alternatives.

There are 82 acres of Critical Habitat for this species within the 16,814 acre Black Mountain IRA. The proposed alternatives would result in changes within designated Critical Habitat for this species

Under Alternative 1, in Critical Habitat, there would be no change in LUZ (67 acres BC, 15 acres BCNM). Suitable uses allowed within those LUZs would be retained. Under Alternatives 2 and 2a, one acre of Critical Habitat would remain in BC and the remaining 81 acres would be zoned BCNM. Under Alternative 3, one acre of Critical Habitat would be zoned BCNM and the remaining 81 acres would become RW.

If effects are occurring to the PCEs, Alternatives 2 and 2a would be wholly beneficial as acres shift from BC to BCNM because of a reduction of suitable uses within the Critical Habitat. Alternative 3 may further reduce effects because a greater number of suitable uses would be precluded under RW. Alternative 3 would also be wholly beneficial.

When the Critical Habitat was designated, special management considerations were identified for the PCEs. The special management considerations would be implemented under all alternatives. In Alternatives 2, 2a, and 3 managing the area as BCNM and RW respectively, may promote use of four of the seven recommended special management considerations to maintain PCEs. Any recovery activities are suitable in all LUZs, hence any future recovery activities would be allowed under all alternatives.

***Eremalche parryi* subsp. *kernensis* (Kern mallow)**

*Potential Effects:* The potential effects discussion above under “effects common to all plant species” is applicable to any T & E plants and Critical Habitat that are known to occur or may occur in the affected IRAs. This species was not known to occur during the 2006 LMP Revision and was not analyzed or included in consultation with USFWS.

Table 71 displays the acres of occurrences of occupied habitat of *Eremalche parryi* subsp. *kernensis* within land use zones across the alternatives. The discussion of effects by alternative follows the table.

**Table 71. Known occurrences of *Eremalche parryi* subsp. *kernensis* in the Sawmill-Badlands IRA**

Land Use Zone	Alternative 1		Alternative 2		Alternative 2a		Alternative 3	
	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat	Occupied Habitat	Critical Habitat
BC	1	0	0	0	0	0	0	0
BCNM	0	0	1	0	1	0	0	0
RW	0	0	0	0	0	0	1	0
Total	1	0	1	0	1	0	1	0

The effects analysis for this population within the Sawmill-Badlands IRA is based on presence alone not acreage. The occurrence has not been verified on the ground by a USFS botanist and is based solely on the geographical coordinates from the California Consortium of Herbaria. It is possible that additional populations could occur within the Sawmill Badlands IRA. Other vouchered specimens that occur near the Quatal and Sespe Frasier IRAs have not been confirmed to occur within the IRAs. Therefore the effects analysis for this proposed action includes only the known occurrence within the Sawmill-Badlands IRA.

In Alternative 1, the occurrence of *Eremalche kernensis* subsp. *parryi* is zoned as Back Country (BC) within the Sawmill-Badlands IRA. Under this alternative, land use zoning of the occupied habitat would be retained as BC. There would be no changes to activities or land use zones within the occupied habitat. The suitable uses (activities) in BC would be retained.

In Alternatives 2 and 2a the occurrence of *Eremalche kernensis* subsp. *parryi* is zoned as Back County Non-Motorized (BCNM) within the Sawmill-Badlands IRA. Overall, management under Alternatives 2 and 2a would be wholly beneficial for this species.

In Alternative 3, the occurrence of occupied habitat of *Eremalche kernensis* subsp. *parryi* is zoned as Recommended Wilderness (RW) within the Sawmill-Badlands IRA. Overall, management under Alternative 3 would be wholly beneficial for this species.

The “recommended actions for the next 5 years” identified in the 2013 USFSW Five Year Review and any future implementation of recovery actions would be allowed under all alternatives.

**Summary of Effects for Threatened and Endangered Species**

Table 72 summarizes the potential effects to *Poa atropurpurea*, *Eryngium aristulatum* var. *parishii*, *Chlorogalum purpureum* var. *reductum* and *Eremalche parryi* subsp. *kernensis* for each alternative.

**Table 72. Summary of Effects of Each Alternative on T & E Plant Species and Critical Habitat**

Effect	Indicator	Alternative 1	Alternatives 2 and 2a	Alternative 3
<b>Effects To Federally Listed Plant Species (TEPC) (Including Beneficial Effects)</b>	<b>Occupied Habitat <i>Poa atropurpurea</i></b>			
	<b>Change in occupied <i>Poa atropurpurea</i> habitat acres into more restrictive land use zones</b>	No change from existing environment. BCMUR = 2.63 acres of occupied habitat	All occupied habitat (2.63 acres) changes from BCMUR to RW	All occupied habitat (2.63 acres) changes from BCMUR to RW
	<b>Relative effects to <i>Poa atropurpurea</i></b>	No change from existing environment	Less impact than Alternative 1 due to less intensive development and limited motorized access/ mechanized use. Wholly beneficial effects anticipated.	Same as Alt 2 & 2a
	<b>Ability to maintain, enhance or treat <i>Poa atropurpurea</i> habitat based on conservation recommendations in the CNF 1991 Species Management Guide</b>	Can maintain, enhance and treat	Can maintain, enhance and treat	Can maintain, enhance and treat
	<b><i>Poa atropurpurea</i> Recovery Plan actions/activities</b>	N/A (No Recovery Plan)	N/A (No Recovery Plan)	N/A (No Recovery Plan)
	<b>Occupied Habitat <i>Eryngium aristulatum</i> var. <i>parishii</i></b>			
	<b>Change in occupied <i>Eryngium aristulatum</i> var. <i>parishii</i> habitat acres into more restrictive land use zones</b>	No change from existing environment. BC=1/10 acre of occupied habitat	All occupied habitat (1/10 acre) changes from BC to RW	All occupied habitat (1/10 acre) changes from BC to RW
	<b>Relative effects to <i>Eryngium aristulatum</i> var. <i>parishii</i></b>	No change from existing environment	Less impact than Alternative 1 due to less intensive development and limited motorized access/ mechanized use. Wholly beneficial effects anticipated.	Same as Alt 2 & 2a

Effect	Indicator	Alternative 1	Alternatives 2 and 2a	Alternative 3
	<b>Ability to maintain, enhance or treat <i>Eryngium aristulatum</i> var. <i>parishii</i> habitat</b>	Can maintain, enhance and treat	Can maintain, enhance and treat	Can maintain, enhance and treat
	<b><i>Eryngium aristulatum</i> var. <i>parishii</i> Recovery Plan actions/activities</b>	Can implement as needed	Can implement as needed	Can implement as needed
<b>Occupied Habitat <i>Chlorogalum purpureum</i> var. <i>reductum</i></b>				
	<b>Change in occupied <i>Chlorogalum purpureum</i> var. <i>reductum</i> habitat acres into more restrictive land use zones</b>	N/A There is no occupied habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
	<b>Relative effects to <i>Chlorogalum purpureum</i> var. <i>reductum</i></b>	N/A There will be no effects to occupied habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
	<b>Ability to maintain, enhance or treat <i>Chlorogalum purpureum</i> var. <i>reductum</i> habitat</b>	N/A There is no occupied habitat for this species in any of the alternatives.	Same as Alt 1	Same as Alt 1
	<b><i>Chlorogalum purpureum</i> var. <i>reductum</i> Recovery Plan actions/activities</b>	N/A There is no occupied habitat for this species in any of the alternatives.	Same as Alt 1	Same as Alt 1

Effect	Indicator	Alternative 1	Alternatives 2 and 2a	Alternative 3
<b>Occupied habitat <i>Eremalche parryi</i> subsp. <i>kernensis</i></b>				
	<b>Change in occupied <i>Eremalche parryi</i> subsp. <i>kernensis</i> habitat acres into more restrictive land use zones</b>	No change from existing environment. Occurrence location is within BC	Occurrence location would change to BCNM	Occurrence location would change to RW
	<b>Relative effects to <i>Eremalche parryi</i> subsp. <i>kernensis</i></b>	No change from existing environment	Less impact than Alt 1 due to reduced motorized access. Wholly beneficial effects anticipated	Least impact due to less intensive development and limited motorized/mechanized use. Wholly beneficial effects anticipated
	<b>Ability to maintain, enhance or treat <i>Eremalche parryi</i> subsp. <i>kernensis</i> habitat</b>	Can maintain, enhance and treat	Can maintain, enhance and treat	Can maintain, enhance and treat
	<b><i>Eremalche parryi</i> subsp. <i>kernensis</i> Recovery Plan activities</b>	Can implement as needed	Can implement as needed	Can implement as needed
<b>Critical Habitat - <i>Poa atropurpurea</i></b>				
<b>Effects to Critical Habitat (including beneficial effects)</b>	<b>Location of CH acres by LUZ</b>	No change from existing environment. BCMUR = 145 acres; BCNM = 15 acres	Less BCMUR and more BCNM than Alternative 1. BCMUR = 16 acres, BCNM = 144 acres	Same as Alt 2 and 2a
	<b>Primary Constituent Elements</b>	No change from existing environment	No change from existing environment	No change from existing environment
	<b>Special Management Considerations</b>	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features
<b>Critical Habitat - <i>Chlorogalum purpureum</i> var. <i>reductum</i></b>				

Effect	Indicator	Alternative 1	Alternatives 2 and 2a	Alternative 3
	<b>Location of CH acres by LUZ</b>	No change from existing environment. BC (67) acres, BCNM (15) acres	Less acres in BC (1), more acres in BCNM (81) than Alternative 1	Same as Alt 2 and 2a for BC; most acres in RW (81)
	<b>Primary Constituent Elements</b>	No change from existing environment	No change from existing environment	No change from existing environment
	<b>Special Management Considerations</b>	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features	Can restore, protect and maintain essential features
<b>Critical Habitat for <i>Eryngium aristulatum</i> var. <i>parishii</i></b>				
	<b>Location of CH acres by LUZ</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
	<b>Primary Constituent Elements</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
	<b>Special Management Considerations</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
<b>Critical Habitat for <i>Eremalche parryi</i> subsp. <i>kernensis</i></b>				
	<b>Location of CH acres by LUZ</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1
	<b>Primary Constituent Elements</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1

Effect	Indicator	Alternative 1	Alternatives 2 and 2a	Alternative 3
	<b>Special Management Considerations</b>	N/A There is no Critical Habitat for this species in any of the alternatives	Same as Alt 1	Same as Alt 1

## Determinations of Effects for Threatened or Endangered Plant Species and Designated Critical Habitat

### Alternative 1 - No Action

The determinations of effects in Alternative 1 would not change from those made in the supporting biological documents for the selected alternative in the FEIS. The supporting documents in that Project Record are incorporated here by reference. The “determinations of effects” from the 2006 LMP were: *may affect and is likely to adversely affect Chlorogalum purpureum* var. *reductum* and *Poa atropurpurea* and may affect and is likely to adversely affect some Critical Habitat for *Chlorogalum purpureum* var. *reductum*. Consultation was re-initiated in 2008 when Critical Habitat was designated. The determination was “*may affect and is likely to adversely affect* some Critical Habitat for *Poa atropurpurea*.”

*Eryngium aristulatum* var. *parishii* and *Eremalche parryi* subsp. *kernensis* were not known to occur on the southern California National Forests during the 2006 Forest Plan Revision thus were not included in the 2006 FEIS analysis or consultation with USFWS. If the Cleveland and Los Padres National Forests determine there are effects to these species, consultation would be initiated

### Alternative 2 - Proposed Action

Implementation of Alternative 2 *may affect and is not likely to adversely affect* occupied or designated Critical Habitat of *Poa atropurpurea*, occupied habitat of *Eryngium aristulatum* var. *parishii* or *Eremalche parryi* subsp. *kernensis* or designated Critical Habitat of *Chlorogalum purpureum* var. *reductum*. The effects of Alternative 2 would be wholly beneficial to these four plant species. Alternative 2 would have *no effect* on occupied habitat of *Chlorogalum purpureum* var. *reductum* or any other T/E species since none are known to occur within the IRAs.

### Alternative 2a – Preferred Alternative

Implementation of Alternative 2 *may affect and is not likely to adversely affect* occupied or designated Critical Habitat of *Poa atropurpurea*, occupied habitat of *Eryngium aristulatum* var. *parishii* or *Eremalche parryi* subsp. *kernensis* or designated Critical Habitat of *Chlorogalum purpureum* var. *reductum*. The effects of Alternative 2a would be wholly beneficial to these four plant species. Alternative 2a would have *no effect* on occupied habitat of *Chlorogalum purpureum* var. *reductum* or any other T/E species since none are known to occur within the IRAs

### **Alternative 3 - Recommended Wilderness Emphasis**

Implementation of Alternative 3 *may affect and is not likely to adversely affect* occupied and Critical Habitat of *Poa atropurpurea*, occupied habitat of *Eryngium aristulatum* var. *parishii* or *Eremalche parryi* subsp. *kernensis* or designated Critical Habitat of *Chlorogalum purpureum* var. *reductum*. The effects of the Proposed Action would be wholly beneficial to these four plant species. Alternative 3 would have *no effect* on occupied habitat of *Chlorogalum purpureum* var. *reductum* or any other Threatened or Endangered species since none are known to occur within the IRAs.

### **Species Proposed for Federal Listing or Proposed Critical Habitat**

There is no proposed Critical Habitat in the affected IRAs, and no plants proposed for listing under the Endangered Species Act occur in or near the IRAs.

### **Monitoring and Evaluation Alternatives A, B, and C:**

Changing the monitoring methodology, in itself, is expected to result in *no effect* to T/E plants or their Critical Habitat.

### **Consultation Requirements**

Informal Consultation was conducted with the Fish and Wildlife Service due to the “*may affect, not likely to adversely affect*” determinations. Based on the proposed action and analysis of effects, Section 7 Formal Consultation is not required. As described in the wildlife section of this SEIS, the Fish and Wildlife Service concurred with the determinations by letter of November 14, 2013.

Table 73 summarizes the effects determinations of the proposed action on all threatened and endangered plant species on the four southern California National Forests.



**Table 73. Summary of Determinations of Effects for Threatened and Endangered Species**

Scientific Name	Common Name	Determination of Effects – Alternatives 2, 2a, and 3
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	NE
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenberry oxytheca	NE
<i>Allium munzii</i>	Munz's onion	NE
<i>Arenaria paludicola</i>	marsh sandwort	NE
<i>Astragalus albens</i>	cushenbury milkvetch	NE
<i>Astragalus brauntonii</i>	Braunton's milkvetch	NE
<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Coachella milkvetch	NE
<i>Astragalus tricarinatus</i>	triplerib milkvetch	NE
<i>Baccharis vanessae</i>	Encinitas falsewillow	NE
<i>Berberis nevinii</i>	Nevin's barberry	NE
<i>Brodiaea filifolia</i>	threadleaf clusterlily	NE
<i>Castilleja cinerea</i>	ashgray paintbrush	NE
<i>Ceanothus ophiochilus</i>	buckthorn	NE
<i>Chlorogalum purpureum</i> var. <i>reductum</i>	Camatta Canyon amole	NE for species; NLAA for CH
<i>Cirsium fontinale</i> var. <i>obispoense</i>	Chorro Creek bog thistle	NE
<i>Dodecahema leptoceras</i>	slender-horned spineflower	NE
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	canyon liveforever	NE
<i>Eremalche kernensis</i>	Kern mallow	NLAA for species
<i>Eremogone ursina</i> (formerly <i>Arenaria</i> )	Bear Valley sandwort	NE
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana woollystar	NE
<i>Erigeron parishii</i>	Parish's fleabane	NE
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	southern mountain buckwheat	NE
<i>Eriogonum ovalifolium</i> ssp. <i>vineum</i>	Cushenbury buckwheat	NE
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button celery	NLAA for species
<i>Nasturtium gambelii</i> (formerly <i>Rorippa</i> )	Gambel's water cress	NE
<i>Physaria kingii</i> ssp. <i>bernardina</i>	San Bernardino Mountains bladderpod	NE
<i>Poa atropurpurea</i>	San Bernardino bluegrass	NLAA for species; NLAA for CH
<i>Sidalcea pedata</i>	bird-footed checkerbloom	NE
<i>Taraxacum californicum</i>	California dandelion	NE
<i>Thelypodium stenopetalum</i>	Slender petal thelypody	NE
NE=No Effect NLAA=Not Likely to Adversely Affect MAA=May Adversely Affect		

## Effects to Region 5 Sensitive Plant Species

The potential effects discussion above under 'effects common to all plant species' is applicable to any sensitive plants that are known to occur or may occur in the affected IRAs. In this analysis, the two issues related to sensitive plant species management are the large number of species that are known or have the potential to occur with the IRAs and how changes in the LUZ allocations influence the types and intensity of projects that may occur in the future.

Table 74 displays acres of mapped sensitive species by IRA across alternatives.

Table 75 displays acreages of mapped sensitive plants in IRAs by species across alternatives.

Table 76 provides a comparison for acres of all sensitive plant occurrences (1,253.98 acres) known from each LUZ for each alternative

The analysis of effects assumes that the viability assessments and effects determinations developed for the FEIS are the baseline for Alternative 1. See the Environmental Consequences sections in the FEIS for discussions of expected effects and viability assessments for Sensitive plants that were associated with the selected alternative. See the Biological Evaluation and viability assessments in the FEIS. Those discussions provide the basis for this evaluation and they are incorporated here by reference.

The botany and non-native species report (USDA FS 2013a) and the Addendum (USDA FS 2013b) describes the potential for effects in terms of acreages in each LUZ for the known occurrences of the sensitive species listed in Table 18. The effects are summarized below.

The analyses in the 2006 biological reports in the Project Record for the FEIS relative to the effects expected to botanical resources from the selected alternative are the same as Alternative 1 (No Action) for this proposal. Those reports that address the following sensitive plant species are incorporated here by reference.

For each of the individual sensitive plant species that occur in any of the affected IRAs, the effects of Alternative 2, 2a, or 3 may help reduce currently-occurring effects from activities allowed under the current zoning.

None of the alternatives, including Alternative 1 (No Action) are expected to result in effects that would threaten the viability of any of the sensitive plants known or likely to occur in any of the affected IRAs.

In general, with the increase of acres of BCNM land use zone and the reduction of suitable uses, Alternatives 2 and 2a may result in greater potential beneficial effects to sensitive plants than Alternative 1. Alternative 3 may result in the greatest level of potential beneficial effects of the four alternatives due to the greatest increase in acres of RW and the greatest reduction in uses/activities that may affect sensitive plants.

In terms of total acreage of all sensitive plant species known to occur in the affected IRAs, Alternatives 2 and 2a may reduce potential effects to the species, and Alternative 3 may further reduce those potential threats.

**Table 74. Acreages of Mapped Sensitive Plant Occurrences Known Within IRAs**

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<b>Angeles</b>			
<b>Westfork IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BC <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BC <i>Comparison:</i> Same as Alternative 1
<i>Lepechinia fragrans</i>	0.08 acres BC	0.08 acres BC	0.08 acres BC
<b>Cleveland</b>			
<b>Barker Valley IRA</b>	<i>LUZs with Occurrences:</i> BC, Mostly BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, Mostly RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, Mostly RW <i>Comparison:</i> Same as Alternative 2
<i>Astragalus oocarpus</i>	0.12 acres BCNM	0.12 acres RW	0.12 acres RW
<i>Brodiaea orcuttii</i>	53.55 acres BCMUR	17.35 acres BCMUR 36.20 acres RW	17.35 acres BCMUR 36.20 acres RW
<i>Caulanthus simulans</i>	2.12 acres BC 3.87 acres BCNM	2.12 acres BC 3.87 acres RW	2.12 acres BC 3.87 acres RW
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	0.04 acres BCNM	0.04 acres RW	0.04 acres RW
<i>Limnanthes alba</i> var. <i>parishi</i> ( <i>Limnanthes gracilis</i> var. <i>parishi</i> )	0.04 acres BC 64.83 acres BCMUR	0.01 acres BC 10.17 acres BCMUR 54.69 acres RW	0.01 acres BC 10.17 acres BCMUR 54.69 acres RW
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.68 acres BCNM	6.68 acres RW	6.68 acres RW
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	5.58 acres BC 3.72 acres BCMUR 68.96 acres BCNM	5.58 acres BC 6.84 acres BCNM 65.83 acres RW	5.58 acres BC 6.84 acres BCNM 65.83 acres RW
<b>Caliente IRA</b>	<i>LUZs with Occurrences:</i> BCNM	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> Same as Alternative 2
<i>Monardella macrantha</i> ssp. <i>hallii</i>	6.66 acres BCNM	6.66 acres RW	6.66 acres RW
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRA</b>	<i>LUZs with Occurrences:</i> BC, BCNM	<i>LUZs with Occurrences:</i> BCMUR, RW <i>Comparison:</i> More BCMUR and RW than Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, RW <i>Comparison:</i> Same as Alternative 2

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<i>Astragalus deanei</i>	0.35 acres BCNM	0.35 acres BCMUR	0.35 acres BCMUR
<i>Clarkia delicata</i>	0.32 acres BC	0.32 acres RW	0.32 acres RW
<b>Coldwater IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, RW <i>Comparison:</i> More RW than Alternative 1 or 2
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 acres BC 0.04 acres BCNM	2.39 acres BC 0.04 acres BCNM	2.39 acres BC 0.04 acres RW
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 acres BC	0.12 acres BC	0.12 acres BC
<i>Lepechinia cardiophylla</i>	7.11 acres BC 0.07 acres BCMUR 8.42 acres BCNM	7.11 acres BC 0.07 acres BCMUR 8.42 acres BCNM	7.11 acres BC 0.07 acres BCMUR 1.29 acres BCNM 7.13 acres RW
<i>Monardella macrantha</i> ssp. <i>hallii</i>	7.22 acres BCNM	7.22 acres BCNM	7.22 acres RW
<i>Phacelia keckii</i>	48.95 acres BCNM	48.95 acres BCNM	48.95 acres RW
<b>Eagle Peak IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCMUR, BCNM, RW <i>Comparison:</i> More RW than Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, BCNM, RW <i>Comparison:</i> Same as Alternative 2
<i>Astragalus oocarpus</i>	16.95 acres BCMUR 13.09 acres BCNM	17.70 acres BCMUR 4.76 acres BCNM 8.58 RW	17.70 acres BCMUR 4.76 acres BCNM 8.58 acres RW
<b>Ladd IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM, <i>Comparison:</i> Same as Alternative 2
<i>Calochortus weedii</i> var. <i>intermedius</i>	0.15 acres BC 1.64 acres BCMUR 0.15 acres BCNM	1.64 acres BCMUR 0.31 acres BCNM	1.64 acres BCMUR 0.31 acres BCNM
<i>Lepichinia cardiophylla</i>	7.24 acres BC 15.14 acres BCNM	22.38 acres BCNM	22.38 acres BCNM
<i>Phacelia keckii</i>	1.06 acres BC	1.06 acres BC	1.06 acres BC

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<b>Sill Hill IRA</b>	BCNM, CB , DAI	CB & DAI same, some RW	DAI same as 1, 2. CB to RW Most RW
<i>Brodiaea orcuttii</i>	13.40 acres BCNM 67.50 acres CB	67.50 acres CB in 2, <b>go to RW in 2a</b> 13.40 RW	80.89 acres RW
<i>Calochortus dunnii</i>	16.08 acres CB	16.08 acres CB, <b>go to RW in 2a</b>	16.08 acres RW
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	26.56 acres BCNM 167.48 acres CB 20.61 acres DAI	167.48 acres CB, <b>go to RW in 2a</b> 20.61 acres DAI 26.56 acres RW	194.04 RW 20.61 DAI
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 acres BCNM	5.26 acres RW 0.47 acres BCNM	5.73 acres RW
<b>Trabuco IRA</b>	<i>LUZs with Occurrences:</i> BC, BCNM, DAI	<i>LUZs with Occurrences:</i> BC, BCNM <i>Comparison:</i> Less BC, more BCNM, and no DAI than Alternative 1	<i>LUZs with Occurrences:</i> RW, BC <i>Comparison:</i> DAI same as Alternative 2 (none); More RW than Alternatives 1 or 2
<i>Dudleya viscida</i>	5.25 acres DAI	5.25 acres BCNM	5.25 acres RW
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	6.99 acres BCNM	6.99 acres BCNM	6.99 acres RW
<i>Lepechinia cardiophylla</i>	45.28 acres BC 55.87 acres BCNM	0.08 acres BC 101.07 acres BCNM	0.08 acres BC 101.07 acres RW
<i>Nolina cismontana</i>	137.38 acres BCNM	137.38 acres BCNM	137.38 acres RW
<i>Phacelia keckii</i>	0.05 acres BC	0.05 acres BC	0.05 acres RW
<i>Satureja chandleri</i>	264.52 acres BCNM	264.52 acres BCNM	264.52 acres RW
<i>Tetracoccus dioicus</i>	6.50 acres BCNM	6.50 acres BCNM	6.50 acres RW
<b>Upper San Diego River IRA</b>	<i>LUZs with Occurrences:</i> BCNM, CB	<i>LUZs with Occurrences:</i> BCMUR, CB, BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, RW <i>Comparison:</i> RW is higher than Alternatives 1 or 2. BCMUR is the same.
<i>Astragalus deanei</i>	14.39 acres BCNM	14.39 acres BCMUR	14.39 acres BCMUR
<i>Clarkia delicata</i>	2.47 acres BCNM	2.47 acres RW	2.47 acres RW

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<b>Los Padres</b>			
<b>Dry Lakes IRA</b>	<i>LUZs with Occurrences:</i> DAI	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 acres DAI	0.08 acres DAI	0.08 acres DAI
<b>Sawmill – Badlands IRA</b>	<i>LUZs with Occurrences:</i> DAI	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> DAI <i>Comparison:</i> Same as Alternative 1
<i>Navarretia peninsularis</i>	0.08 acres DAI	0.08 acres DAI	0.08 acres DAI
<b>Sespe – Frazier IRA</b>	<i>LUZs with Occurrences:</i> BC, BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCNM, BCMUR <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW, BCNM <i>Comparison:</i> More RW than Alternatives 1 and 2
<i>Acanthoscyphus parishi</i> var. <i>abramsii</i>	0.08 acres BCMUR	0.08 acres BCNM	0.08 acres RW
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 acres BC 0.08 acres BCNM	0.16 acres BCNM	0.16 acres RW
<i>Fritillaria ojaiensis</i>	0.23 acres BCNM	0.23 acres BCNM	0.23 acres RW
<i>Monardella linoides</i> ssp. <i>oblonga</i>	0.08 acres BC	0.08 acres BCNM	0.08 acres BCNM
<i>Navarretia peninsularis</i>	0.08 acres BC	0.08 acres BCNM	0.08 acres BCNM
<b>White Ledge IRA</b>	<i>LUZs with Occurrences:</i> BCNM	<i>LUZs with Occurrences:</i> BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> Same as Alternative 1
<i>Streptanthus campestris</i>	0.08 acres BCNM	0.08 acres BCNM	0.08 acres RW
<b>San Bernardino</b>			
<b>Cactus Springs B IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BCNM, BC, less BC, BCNM <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW, BC <i>Comparison:</i> More RW than Alternatives 1 or 2; same BC as Alternative 2
<i>Astragalus bicristatus</i>	0.18 acres BC	0.18 acres BCNM	0.18 acres RW
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 acres BC	15.90 acres BCNM	15.90 acres RW
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	0.24 acres BC	0.24 acres BCNM	0.24 acres RW

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.15 acres BC	0.15 acres BC	0.15 acres BC
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 acres BC	0.18 acres BCNM	0.18 acres RW
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 acres BC	0.14 acres BC 0.51 acres BCNM	0.14 acres BC 0.51 acres RW
<i>Heuchera hirsutissima</i>	0.72 acres BC	0.18 acres BC 0.54 acres BCNM	0.18 acres BC 0.54 acres RW
<i>Lilium parryi</i>	0.23 acres BC	0.23 acres BCNM	0.23 acres RW
<i>Saltugilia latimeri</i>	0.38 acres BC	0.38 acres BCNM	0.38 acres RW
<i>Sedum niveum</i>	0.08 acres BC	0.08 acres BCNM	0.28 acres RW
<i>Sidotheca emarginata</i>	0.99 acres BC	0.26 acres BC 0.73 acres BCNM	0.26 acres BC 0.73 acres RW
<b>Cactus Springs B New IRA</b>	<i>LUZs with Occurrences:</i> BC	<i>LUZs with Occurrences:</i> BC, BCNM <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> BC, RW <i>Comparison:</i> Same BC as 2, More RW than Alternative 1 or 2
<i>Calochortus palmeri</i> var. <i>munzii</i>	0.16 acres BC	0.16 acres BCNM	0.16 acres RW
<i>Dieteria canescens</i> var. <i>ziegleri</i>	0.38 acres BC	0.38 acres BCNM	0.38 acres RW
<i>Heuchera hirsutissima</i>	1.32 acres BC	1.32 acres BCNM	1.32 acres RW
<i>Lilium parryi</i>	0.06 acres BC	0.06 acres BC	0.06 acres BC
<i>Sidotheca emarginata</i>	0.54 acres BC	0.54 acres BCNM	0.54 acres RW
<b>Pyramid Peak A IRA</b>	<i>LUZs with Occurrences:</i> BC, RW	<i>LUZs with Occurrences:</i> BCNM, RW <i>Comparison:</i> More BCNM than Alternative 1	<i>LUZs with Occurrences:</i> RW <i>Comparison:</i> More RW than Alternative 1 or 2
<i>Boechera johnstonii</i>	5.08 acres BC 8.37 acres RW	5.08 acres BCNM 8.37 acres RW	13.44 acres RW
<i>Penstemon californicus</i>	6.18 acres BC 8.56 acres RW	6.18 acres BCNM 8.56 acres RW	14.74 acres RW
<b>Raywood Flat B IRA</b>	<i>LUZs with Occurrences:</i> BCMUR, BCNM	<i>LUZs with Occurrences:</i> BCMUR, BCNM <i>Comparison:</i> Same as Alternative 1	<i>LUZs with Occurrences:</i> BCMUR, RW <i>Comparison:</i> Same as Alternative 1
<i>Calochortus plummerae</i>	0.31 acres BCNM	0.31 acres BCNM	0.31 acres RW

Inventoried Roadless Area, Sensitive Species <sup>1</sup>	Acres of Sensitive Plant Occurrences by Land Use Zone <sup>2</sup>		
	Alternative 1 (No Action)	Alternative 2 (Proposed Action) and Alternative 2a (Preferred Alt.)	Alternative 3 (RW Emphasis)
<i>Lilium parryi</i>	0.10 acres BCMUR	0.10 acres BCMUR	0.10 acres BCMUR

<sup>1</sup> IRAs not listed above have no USFS NRM TESP data available at this time.  
<sup>2</sup>Data source: USFS NRM TESP 8/30/12 and LUZ changes in Alt 2a FSEIS

**Table 75. Acreages of Mapped Sensitive Plants in IRAs by Species**

Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action) And Alternative 2a (Preferred Alternative)	Alternative 3 (RW Emphasis)	Total
<i>Acanthoscyphus parishi</i> var. <i>abramsii</i>	0.08 BCMUR	0.08 BCMUR	0.08 RW	0.08
<i>Astragalus bicristatus</i>	0.18 BC	0.18 BCNM	0.18 RW	0.18
<i>Astragalus deanei</i>	0.35 BCNM	0.35 BCMUR	0.35 BCMUR	14.74
	14.39 BCNM	14.39 BCMUR	14.39 BCMUR	
<i>Astragalus oocarpus</i>	0.12 BCNM	0.12 RW	0.12 RW	31.16
	16.95 BCMUR	17.70 BCMUR	17.70 BCMUR	
	13.09 BCNM	4.76 BCNM	4.76 BCNM	
		8.58 RW	8.58 RW	
<i>Boechera johnstonii</i>	5.08 BC	5.08 BCNM	13.44 RW	13.44
	8.37 RW	8.37 RW		
<i>Brodiaea orcuttii</i>		36.20 RW	36.20 RW	134.45
	53.55 BCMUR	17.35 BCMUR	17.35 BCMUR	
	13.40 BCNM	67.50 CB in Alt 2, <b>67.50 RW in Alt 2a.</b>	80.89 RW	
	67.50 CB	13.40 RW		
<i>Calochortus dunnii</i>	16.08 CB	16.08 CB in Alt 2, <b>16.08 RW in Alt2a</b>	16.08 CB to RW	16.08
<i>Calochortus palmeri</i> var. <i>munzii</i>	15.90 BC	15.90 BCNM	15.90 RW	16.06



Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action) And Alternative 2a (Preferred Alternative)	Alternative 3 (RW Emphasis)	Total
	0.16 BC	0.16 BCNM	0.16 RW	
<i>Calochortus palmeri</i> var. <i>palmeri</i>	0.08 BC	0.15 BCNM	0.15 RW	0.15
	0.08 BCNM			
<i>Calochortus plummerae</i>	0.31 BCNM	0.31 BCNM	0.31 RW	0.31
<i>Calochortus weedii</i> var. <i>intermedius</i>	2.39 BC	2.39 BC	2.39 BC	4.37
	0.04 BCNM	0.04 BCNM	0.04 RW	
	0.15 BC	1.64 BCMUR	1.64 BCMUR	
	1.64 BCMUR	0.31 BCNM	0.31 BCNM	
<i>Calochortus weedii</i> var. <i>vestus</i>	0.08 DAI	0.08 DAI	0.08 DAI	0.08
<i>Caulanthus simulans</i>	2.12 BC	2.12 BC	2.12 BC	5.99
	3.87 BCNM	3.87 RW	3.87 RW	
<i>Chorizanthe parryi</i> var. <i>parryi</i>	0.12 BC	0.12 BC	0.12 BC	0.12
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	0.04 BCNM	0.04 RW	0.04 RW	0.04
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	0.24 BC	0.24 BCNM	0.24 RW	0.24
<i>Clarkia delicata</i>	0.32 BC	0.32 RW	0.32 RW	2.79
	2.47 BCNM	2.47 RW	2.47 RW	
<i>Dieteria canescens</i> var. <i>ziegleri</i> ( <i>Machaeranthera</i> )	0.38 BC	0.38 BCNM	0.38 RW	0.53
	0.15 BC	0.15 BC	0.15 BC	
<i>Draba corrugata</i> var. <i>saxosa</i>	0.18 BC	0.18 BCNM	0.18 RW	0.18
<i>Dudleya viscida</i>	5.25 DAI	5.25 BCNM	5.25 RW	5.25
<i>Fritillaria ojaiensis</i>	0.23 BCNM	0.23 BCNM	0.23 RW	0.23
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	0.64 BC	0.14 BC	0.14 BC	0.64
		0.51 BCNM	0.51 RW	
<i>Hesperocyparis stephensonii</i> ( <i>Cupressus arizonica</i> ssp. <i>a.</i> )	167.48 CB	26.56 RW		214.65
	26.56 BCNM	167.48 CB in Alt 2	194.04 RW	

Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action) And Alternative 2a (Preferred Alternative)	Alternative 3 (RW Emphasis)	Total
		<b>167.48 RW in Alt 2a</b>		
	20.61 DAI	20.61 DAI	20.61 DAI	
<i>Heuchera hirsutissima</i>	0.72 BC	0.18 BC	0.18 BC	2.04
		0.54 BCNM	0.54 RW	
	1.32 BC	1.32 BCNM	1.32 RW	
<i>Horkelia cuneata ssp. puberula</i>	6.99 BCNM	6.99 BCNM	6.99 RW	6.99
<i>Lepechinia cardiophylla</i>	45.28 BC	0.08 BC	0.08 BC	139.13
	55.87 BCNM	101.07 BCNM	101.07 RW	
	7.11 BC	7.11 BC	7.11 BC	
	0.07 BCMUR	0.07 BCMUR	0.07 BCMUR	
	8.42 BCNM	8.42 BCNM	1.29 BCNM	
			7.13 RW	
	7.24 BC	22.38 BCNM	22.38 BCNM	
	15.14 BCNM			
<i>Lepechinia fragrans</i>	0.08	0.08	0.08	0.08
<i>Lilium parryi</i>	0.23 BC	0.23 BCNM	0.23 RW	0.39
	0.06 BC	0.06 BC	0.06 BC	
	0.10 BCMUR	0.10 BCMUR	0.10 BCMUR	
<i>Limnanthes alba var. parishi</i>	0.04 BC	0.01 BC	0.01 BC	64.87
	64.83 BCMUR	10.17 BCMUR	10.17 BCMUR	
		54.69 RW	54.69 RW	
<i>Monardella linoides ssp. oblonga</i>	0.08 BC	0.08 BCNM	0.08 BCNM	0.08
<i>Monardella macrantha ssp. hallii</i>	6.68 BCNM	6.68 RW	6.68 RW	20.56
	6.66 BCNM	6.66 RW	6.66 RW	
	7.22 BCNM	7.22 BCNM	7.22 RW	
<i>Monardella nana ssp. leptosiphon</i>	5.58 BC	5.58 BC	5.58 BC	78.26
	3.72 BCMUR	6.84 BCNM	6.84 BCNM	
	68.96 BCNM	65.83 RW	65.83 RW	

Species	Alternative 1 (No Action)	Alternative 2 (Proposed Action) And Alternative 2a (Preferred Alternative)	Alternative 3 (RW Emphasis)	Total
<i>Navarretia peninsularis</i>	0.08 DAI	0.08 DAI	0.08 DAI	0.16
	0.08 BC	0.08 BCNM	0.08 BCNM	
<i>Nolina cismontana</i>	137.38 BCNM	137.38 BCNM	137.38 RW	137.38
<i>Penstemon californicus</i>	6.18 BC	6.18 BCNM	14.74 RW	14.74
	8.56 RW	8.56 RW		
<i>Phacelia keckii</i>	48.95 BCNM	48.95 BCNM	48.95 RW	50.06
	1.06 BC	1.06 BC	1.06 BC	
	0.05 BC	0.05 BC	0.05 RW	
<i>Saltugilia latimeri</i>	0.38 BC	0.38 BCNM	0.38 RW	0.38
<i>Satureja chandleri</i>	264.52 BCNM	264.52 BCNM	264.52 RW	264.52
<i>Sedum niveum</i>	0.08 BC	0.08 BCNM	0.28 RW	0.08
<i>Sidothea emarginata</i>	0.99 BC	0.26 BC	0.26 BC	1.53
		0.73 BCNM	0.73 RW	
	0.54 BC	0.54 BCNM	0.54 RW	
<i>Streptanthus campestris</i>	0.08 BCNM	0.08 BCNM	0.08 RW	0.08
<i>Tetracoccus dioicus</i>	6.50 BCNM	6.50 BCNM	6.50 RW	6.5
<i>Thermopsis californica</i> var. <i>semota</i>	5.73 BCNM	0.47 BCNM 5.26 RW	5.73 RW	5.73
<sup>1</sup> Acreages are only available for the occurrences in the Forest Service NRIS database. Other known occurrences that are not mapped in the database are not displayed.				

**Table 76. Summary of Mapped Sensitive Plant Occurrence Acres by LUZ <sup>1</sup>**

BC	BCMUR	BCNM	CB	DAI	RW	Grand Total
<b>Alternative 1</b>						
104.81 (9%)	140.94 (11%)	714.20 (57%)	251.10 (20%)	26.02 (2%)	16.93 (1%)	1,253.98
<b>Alternative 2/2a</b>						
19.39 (1%)	60.77 (5%)	654.36 (52%)	251.10 (20%)	20.77 (2%)	247.61 (20%)	1,253.98
<b>Alternative 3</b>						
19.34 (1%)	60.77 (5%)	35.74 (3%)	0 (0%)	20.77 (2%)	1,117.36 (89%)	1,253.98
<sup>1</sup> This table only includes sensitive plant occurrences that are mapped in the Forest Service NRIS database. A number of sensitive plants are not mapped and no acreages are available. <i>Note: Table does not reflect CB acres going to RW in Sill Hill IRA in Alternative 2a.</i>						

Table 76 only displays occurrences that have been mapped and are in GIS. Other occurrences that have not been mapped (as discussed above) of sensitive species are known to occur in the affected IRAs. Because of the lack of mapped data, it is not possible to quantify the potential effects. Nonetheless, it is likely that the comparisons presented in Table 76 are similar for those unmapped species as well as any undetected sensitive plant occurrences.

In summary, under Alternative 1, approximately 42% of the mapped sensitive plant acres may be experiencing effects associated with activities that may have a greater risk of effects to them or their habitats (e.g. motorized use of roads and trails, mining, grazing, special use permitted activities, etc.) because they are in BC, BCMUR, CB, or DAI. Under Alternatives 2 and 2a, approximately 28% of the mapped sensitive plant acres are in BC, BCMUR, CB, or DAI. Under Alternative 3, 8% of mapped sensitive plant acres are in BC, BCMUR, or DAI. Thus, the potential beneficial effects of Alternatives 2 and 2a are greater than in Alternative 1; and the potential beneficial effects of Alternative 3 are greater than either Alternatives 1, 2, or 2a.

### Determination of Effects for Sensitive Plants

#### Alternative 1 - No Action

Alternative 1 is continued implementation of the LMP, the viability assessments and determinations of effects would not change from those made in the supporting biological documents for the selected alternative in the FEIS. The supporting documents in that Project Record are incorporated here by reference.

#### Alternative 2 - Proposed Action

With the exception of one species, Alternative 2 would not impact any of the sensitive plant species discussed. The effects of Alternative 2 are expected to be beneficial for sensitive plants. *Astragalus deanei* is the exception. The 14.74 acres zoned as BCNM in Alternative 1 (No Action) would be rezoned to BCMUR in Alternative 2. It was determined the effect of rezoning non- motorized habitat to motorized use restricted habitat would not result in “no impact.” Nor would it result in a beneficial effect. Therefore the effects determination for *Astragalus deanei* in alternative 2 is “*may affect individuals but not likely to lead in a trend towards federal listing*”.

The rationale as to why this determination is not expected to lead in a trend towards federal listing is described in the Addendum to the Botanical Evaluation (USDA FS 2013b).

### Alternative 2a - Preferred Alternative

With the exception of one species, Alternative 2a would not impact any of the sensitive plant species discussed. The effects of Alternative 2a are expected to be beneficial for sensitive plants. Alternative 2a is expected to provide a greater beneficial effect due to the small increase of acreage of RW over Alternative 2.

*Astragalus deanei* is the exception. The 14.74 acres zoned as BCNM in Alternative 1 (No Action) would be rezoned to BCMUR in Alternative 2a. It was determined the effect of rezoning non-motorized habitat to motorized use restricted habitat would not result in “no impact”. Nor would it result in a beneficial effect. Therefore the effects determination for *Astragalus deanei* in alternatives 2a is “**may affect individuals but not likely to lead in a trend towards federal listing**”. The rationale as to why this determination is not expected to lead in a trend towards federal listing is described in the Addendum to the Botanical Evaluation (USDA FS 2013b).

### Alternative 3 - Recommended Wilderness Emphasis

With the exception of one species, Alternative 3 would not impact any of the sensitive plant species discussed. The effects of Alternative 3 are expected to be beneficial for sensitive plants. Alternative 3 is expected to provide a greater beneficial effect due to the increased acreage of RW over Alternatives 2 and 2a.

*Astragalus deanei* is the exception. The 14.74 acres zoned as BCNM in Alternative 1 (No Action) would be rezoned to BCMUR in Alternative 3. It was determined the effect of rezoning non-motorized habitat to motorized use restricted habitat was not result in “no impact”. Nor would it result in a beneficial effect. Therefore the effects determination for *Astragalus deanei* in alternative 3 is: “**may affect individuals but will not lead in a trend towards federal listing**”. The rationale as to why this determination is not expected to lead towards a trend towards federal listing is described in the Addendum to the Botanical Evaluation (USDA FS 2013b). Table 77 summarizes the determinations of effects for sensitive plants.

**Table 77. Summary of Effects Determinations for USFS Region 5 Sensitive Plant Species Known to Occur Within Analysis Area\***

Scientific Name	Occurrence Information	Determinations for Alternatives 2, 2a, and 3
<i>Acanthoscyphus parishi</i> var. <i>abramsii</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Allium howellii</i> var. <i>clokeyi</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Arctostaphylos pilosula</i>	Black Mountain (LPNF), Machesna Mountain (LPNF)	NI/BI
<i>Arctostaphylos refugioensis</i>	Tequepis (LPNF)	NI/BI
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i>	Raywood Flat B (SBNF)	NI/BI
<i>Astragalus bicristatus</i>	Cactus Springs B (SBNF)	NI/BI
<i>Astragalus deanei</i>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego	MAI

Scientific Name	Occurrence Information	Determinations for Alternatives 2, 2a, and 3
	River (CNF)	
<i>Astragalus oocarpus</i>	Barker Valley, Eagle Peak (CNF)	NI/BI
<i>Boechea johnstonii</i>	Pyramid Peak A (SBNF)	NI/BI
<i>Botrychium crenulatum</i>	Raywood Flat B (SBNF)	NI/BI
<i>Brodiaea orcuttii</i>	Barker Valley, Sill Hill (CNF)	NI/BI
<i>Calochortus clavatus</i> ssp. <i>gracilis</i>	Fish Canyon (ANF), Red Mountain (ANF), Salt Creek (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Calochortus dunnii</i>	Sill Hill (CNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>munzii</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Calochortus plummerae</i>	Raywood Flat B (SBNF), West Fork (ANF), Westfork (ANF)	NI/BI
<i>Calochortus simulans</i>	Garcia Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Calochortus weedii</i> var. <i>intermedius</i>	Coldwater, Ladd (CNF)	NI/BI
<i>Calochortus weedii</i> var. <i>vestus</i>	Dry Lakes (LPNF), Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Calycadenia villosa</i>	Black Mountain (LPNF)	NI/BI
<i>Castilleja gleasonii</i>	Fish Creek (ANF)	NI/BI
<i>Castilleja lasiorhyncha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Caulanthus simulans</i>	Barker Valley (CNF),	NI/BI
<i>Chorizanthe blakleyi</i>	Fox Mountain (LPNF), Spoor Canyon (LPNF)	NI/BI
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Coldwater (CNF)	NI/BI
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Barker Valley (CNF)	NI/BI
<i>Chorizanthe rectispina</i>	Black Mountain (LPNF)	NI/BI
<i>Clarkia delicata</i>	Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New, Upper San Diego River (CNF)	NI/BI
<i>Delphinium hesperium</i> ssp. <i>Cuyamaca</i>	Sill Hill (CNF)	NI/BI
<i>Delphinium umbraulorum</i>	Diablo (LPNF), Fox Mountain (LPNF), Garcia Mountain (LPNF), Machesna Mountain (LPNF), Sespe – Frazier (LPNF), Spoor Canyon (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Dieteria canescens</i> var. <i>zieglerei</i>	Cactus Springs B (SBNF), Cactus Springs B	NI/BI

Scientific Name	Occurrence Information	Determinations for Alternatives 2, 2a, and 3
	New (SBNF)	
<i>Draba corrugata</i> var. <i>saxosa</i>	Cactus Springs B (SBNF)	NI/BI
<i>Dudleya viscida</i>	Trabuco (CNF)	NI/BI
<i>Eriastrum luteum</i>	Black Mountain (LPNF)	NI/BI
<i>Eriophyllum lanatum</i> var. <i>hallii</i>	Fox Mountain (LPNF)	NI/BI
<i>Fritillaria ojaiensis</i>	Sespe – Frazier (LPNF), Tequepis (LPNF), White Ledge (LPNF)	NI/BI
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	Raywood Flat B (SBNF)	NI/BI
<i>Hesperocyparis stephensonii</i>	Sill Hill (CNF), Upper San Diego River (CNF)	NI/BI
<i>Heuchera hirsutissima</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Heuchera parishi</i>	Raywood Flat B (SBNF)	NI/BI
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Trabuco (CNF)	NI/BI
<i>Horkelia truncatae</i>	Ladd (CNF)	NI/BI
<i>Imperata brevifolia</i>	Antimony (LPNF), Dry Lakes (LPNF), West Fork (ANF), Westfork (ANF)	NI/BI
<i>Layia heterotricha</i>	Antimony (LPNF), Fox Mountain (LPNF), Quatal (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Lepechinia cardiophylla</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Lepechinia fragrans</i>	West Fork (ANF), Westfork (ANF)	NI/BI
<i>Lilium parryi</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF), Raywood Flat B (SBNF), West Fork (ANF),	NI/BI
<i>Limnanthes alba</i> var. <i>parishi</i>	Barker Valley (CNF)	NI/BI
<i>Linanthus orcutti</i>	Caliente (CNF)	NI/BI
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Madulce (LPNF)	NI/BI
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Barker Valley (CNF), Caliente (CNF), Coldwater (CNF)	NI/BI
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	Barker Valley (CNF)	NI/BI
<i>Navarretia peninsularis</i>	Sawmill – Badlands (LPNF), Sespe – Frazier (LPNF)	NI/BI
<i>Nolina cistmontana</i>	Trabuco (CNF)	NI/BI
<i>Opuntia basilaris</i> ssp. <i>brachyclada</i>	Fish Canyon (ANF), Red Mountain (ANF), Sespe-Frazier (ANF), Tule (ANF)	NI/BI
<i>Parnassia cirrata</i> var. <i>cirrata</i>	Raywood Flat B (SBNF)	NI/BI
<i>Penstemon californicus</i>	Pyramid Peak A (SBNF)	NI/BI

Scientific Name	Occurrence Information	Determinations for Alternatives 2, 2a, and 3
<i>Phacelia excilis</i>	Sespe – Frazier (LPNF)	NI/BI
<i>Phacelia keckii</i>	Coldwater (CNF), Ladd (CNF), Trabuco (CNF)	NI/BI
<i>Saltugilia latimeri</i>	Cactus Springs B (SBNF)	NI/BI
<i>Satureja chandleri</i>	Trabuco (CNF)	NI/BI
<i>Sedum niveum</i>	Cactus Springs B (SBNF)	NI/BI
<i>Sidalcea hickmanii ssp. parishii</i>	Fox Mountain (LPNF), Machesna Mountain (LPNF), Spoor Canyon (LPNF), Raywood Flat B (SBNF)	NI/BI
<i>Sidotheca emarginata</i>	Cactus Springs B (SBNF), Cactus Springs B New (SBNF)	NI/BI
<i>Streptanthus bernardinus</i>	Cucamonga B (SBNF)	NI/BI
<i>Streptanthus campestris</i>	White Ledge (LPNF), Cactus Springs B (SBNF)	NI/BI
<i>Symphyotrichum defoliatum</i>	Upper San Diego River (CNF)	NI/BI
<i>Tetracoccus dioicus</i>	Trabuco (CNF)	NI/BI
<i>Thermoposis californica</i> var. <i>semota</i>	Sill Hill (CNF), Upper San Diego River (CNF), Tequepis (LPNF)	NI/BI
<i>Thermopsis macrophylla</i>	Tequepis (LPNF)	NI/BI
*Sensitive list includes those species managed as Sensitive prior to the June 30, 2013 Sensitive List		
**1 <u>Determination Codes:</u> MAI = may affect individuals but not likely to lead to a trend to Federal listing for Sensitive species. NI/BI=No impact and potentially beneficial impact		

## Invasive Non-native Species

### Potential Effects to the Risk of Introduction, Spread, and Management of Non-Natives

The two issues concerning non-native species management are related directly to how changes in Land Use Zones could influence the introduction and spread of non-native species and whether the available control methods would vary by LUZs. This section describes how changes in LUZs relate to non-native species introduction and spread, and control issues. The botany and non-native species report (USDA FS 2013a) and the Addendum (2013b) contains a more detailed discussion of the summary below. Table 78 summarizes the mapped occurrences by LUZ for each alternative.

### Summary of Effects to Non-Native Species Risk and Management

Table 79 summarizes the potential effects in terms of introduction, establishment, spread, and management of non-native plants and animals for each alternative. The risk for the potential introduction, establishment and spread of non-native plants and animals may be highest under Alternative 1 (No Action). This risk is due to the greatest amount of motorized and mechanized



access, and the least potential to prioritize, decommission and restore the 188 miles of unauthorized routes within the IRAs. There is also a higher risk that some non-native animals would be attracted to the edge effect along these routes and that potential disturbance from other suitable uses could promote conditions favorable for the persistence of non-native plant and animals. This risk is highest in this alternative due to the types and acreages of suitable uses that would be allowed within the current land use zones.

The risks may be lower in Alternatives 2 and 2a due to the potential for a slightly lower number of roads/trails available for mechanical (i.e. mountain bikes) and motorized vehicles and reduced acreage for suitable uses within land use zones and recommended wilderness. Risks would be lowest in Alternative 3 due the highest acres of RW having the fewest miles available for mountain biking and the fewest acres available for suitable uses. Risk would also be reduced in Alternatives 2, 2a, and 3 as more priority is placed on the decommissioning and restoration of unauthorized roads within BCNM LUZ and RW respectively.

The ability to detect, control and eradicate non-native plants and animals would remain the same under all alternatives.

**Table 78. Acreages of Mapped Invasive Plant Occurrences by Forest, Land Use Zone and Inventoried Roadless Areas**

Alternative and Land Use Zone	Alternative 1 (No Action)						Alternative 2/2a (Proposed Action /Preferred Alternative)						Alternative 3 (RW Emphasis)					
	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	Total Acres
<b>Angeles National Forest</b>																		
<b>Red Mountain IRA</b>				0.41		0.41			0.41			0.41					0.41	0.41
• Spanish broom				0.41		0.41			0.41			0.41					0.41	0.41
<b>Salt Creek IRA</b>				0.11		0.11					0.11	0.11					0.11	0.11
• Yellow star thistle				0.11		0.11					0.11	0.11					0.11	0.11
<b>West Fork IRA</b>		2.4 4	0.17			2.62		2.4 4	0.17			2.62				2.44	0.17	2.62
• Spanish broom		0.2 6				0.26		0.2 6				0.26				0.26		0.26
• Tocalote (Maltese star thistle)		2.1 8	0.17			2.35		2.1 8	0.17			2.35				2.18	0.17	2.35
• Sweet clover			0			0			0			0					0	0
<b>Westfork IRA</b>	2.7			0.17		2.87	2.7			0.17		2.87	2.7			0.17		2.87
• Bull thistle	0					0	0					0	0					0
• Spanish broom	2.63			0.17		2.81	2.63			0.17		2.81	2.63			0.17		2.81
• Tree tobacco	0.06					0.06	0.06					0.06	0.06					0.06
• Washington fan palm	0					0	0					0	0					0
<b>ANF Totals</b>	2.7	2.4 4	0.17	0.7		6.02	2.7	2.4 4	0.59	0.17	0.11	6.02	2.7			2.62	0.7	6.02
<b>Cleveland National Forest</b>																		
<b>Cedar Creek</b>		4.6 1				4.61		4.6 1				4.61					4.61	4.61
• Tamarisk (salt cedar)		4.6 1				4.61		4.6 1				4.61					4.61	4.61
<b>Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River New IRA</b>	1.06					1.06	0.98				0.08	1.06					1.06	1.06
• Himalayan blackberry	0.28					0.28	0.27				0.02	0.28					0.28	0.28
• Italian plumeless thistle	0.78					0.78	0.72				0.06	0.78					0.78	0.78
<b>Upper San Diego River IRA</b>			0.02			0.02			0.02			0.02			0.0 2			0.02
• Common St. John's wort			0.02			0.02			0.02			0.02			0.0 2			0.02
<b>CNF Totals</b>	1.06	4.6	0.02			5.69	0.98	4.6	0.02		0.08	5.69			0.0		5.67	5.69

Alternative and Land Use Zone	Alternative 1 (No Action)						Alternative 2/2a (Proposed Action /Preferred Alternative)						Alternative 3 (RW Emphasis)					
	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	Total Acres
		1						1							2			
<b>Los Padres National Forest</b>																		
<b>Diablo</b>	0.45					0.45	0.45					0.45	0.45					0.45
• yellow star-thistle	0.45					0.45	0.45					0.45	0.45					0.45
<b>Dry Lakes IRA</b>	3.13			0		3.13	3.13			0		3.13	3.13			0		3.13
• tocolote (Maltese star-thistle)	0.21					0.21	0.21					0.21	0.21					0.21
• Piney-woods Dropseed	2.61			0		2.61	2.61			0		2.61	2.61			0		2.61
• yellow star-thistle	0.31					0.31	0.31					0.31	0.31					0.31
<b>Juncal IRA</b>	13.8					13.8	13.8					13.8	13.8					13.8
• yellow star-thistle	13.8					13.8	13.8					13.8	13.8					13.8
	2					2	2					2	2					2
<b>Sespe - Frazier IRA</b>	29.7	0.0	16.1	13.4		59.4	18.8	0.0	27.0	13.4		59.4	18.8		6.9	13.4	20.2	59.4
	2	5	9	7		3	3	5	8	7		3	3		7	7	6	3
• tocolote (Maltese star-thistle)	1.16	0.1	2.34	12.4		15.9	1.51	0.0	1.99	12.4		15.9	1.51			12.4	2.05	15.9
				1		7		5		1		7			1			7
• Piney-woods Dropseed	0.01		0			0.01			0.01			0.01			0		0.01	0.01
• Small flower tamarisk	1.57		0.52			2.09	2.08		0.01			2.09	2.08				0.01	2.09
• Fennel				1.06		1.06				1.06		1.06				1.06		1.06
• yellow star-thistle	27.0		13.3			40.3	15.2		25.1			40.3	15.2		6.9		18.2	40.3
<b>White Ledge IRA</b>		4.3	0.07			4.36		4.2	0.07			4.36		4.1			0.17	4.36
								9						9				
• tocolote (Maltese star-thistle)		3.5				3.54		3.5				3.54		3.5			0	3.54
								4						3				
• fennel		0.2				0.16		0.1				0.16		0.1				0.16
								6						6				
• yellow star-thistle		0.6	0.07			0.66		0.5	0.07			0.66		0.5			0.16	0.66
								9										
<b>LPNF Totals</b>	47.1	4.3	16.3	13.5		81.2	36.2	4.3	27.2	13.5		81.2	36.2	4.2	6.9	13.5	20.4	81.2
								4										
<b>San Bernardino National Forest</b>																		
<b>Cactus Springs B IRA</b>	0.68					0.68	0.47		0.22			0.68	0.47				0.22	0.68
• red brome	0.68					0.68	0.47		0.22			0.68	0.47				0.22	0.68
<b>Cucamonga C IRA</b>	0.08		0.15			0.23	0.15		0.08			0.23	0.08	0.0			0.08	0.23
								8						8				

Alternative and Land Use Zone	Alternative 1 (No Action)						Alternative 2/2a (Proposed Action /Preferred Alternative)						Alternative 3 (RW Emphasis)					
	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	total	BC	BCMUR	BCNM	DAI	RW	Total Acres
• Tocolot (Maltese star-thistle)	0.08		0.15			0.23	0.15		0.08			0.23	0.08	0.08			0.08	0.23
<b>Pyramid Peak A IRA</b>	0.11	9.7	28.3		27.7	65.78			38.06		27.72	65.78					65.78	65.78
• Tamarisk (salt cedar)	0.11	9.66	28.1		27.7	65.8			38.1		27.7	65.8					65.8	65.8
<b>Pyramid Peak A New IRA</b>					4.69	4.69					4.69	4.69					4.69	4.69
• Tamarisk (Saltcedar)					4.69	4.69					4.69	4.69					4.69	4.69
<b>SBNF Totals</b>	0.87	9.66	28.4		32.4	71.4	0.62		38.4		32.4	71.4	0.54	0.1			70.8	71.4
<b>GRAND TOTALS</b>	51.8	21.1	44.9	14.17	32.4	164.3	40.53	11.39	66.11	13.65	32.59	164.3	39.44	4.27	6.92	16.09	97.55	164.3

**Table 79. Effects of All Alternatives on Non-Native Species Introduction, Spread, and Management Actions**

<b>Effect</b>	<b>Indicator</b>	<b>Alternative 1 (No Action)</b>	<b>Alternatives 2 (Proposed Action) and Alternative 2a (Preferred Alternative)</b>	<b>Alternative 3 (RW Emphasis)</b>
<b>Non-native Species Introductions and Spread of Established Occurrences</b>	Potential for introductions and spread of non-native species from roads, trails, Special Uses, recreation, and other Forest management activities	No change from existing environment	Greater potential to reduce non-native species introductions and spread than Alternative 1.	Greatest potential to reduce non-native species introductions and spread than Alternatives 1, 2, and 2a.
<b>Non-native Species Control and Eradication Treatments</b>	Number of non-native species affected.	No change from existing environment	Same as Alternative 1.	Same as Alternative 1.
	Ability to conduct management activities of non-native species to promote recovery of TES and native species and habitats.	Can implement as funds allow per SEIS Suitable Uses Table.	Same as Alternative 1.	Same as Alternative 1.

## Watershed

Implementation of the LUZs and LMP standards and guidelines under any of the alternatives could lead to improvements in watershed condition, which in turn could affect the watershed condition class rating. These changes occur as projects are implemented to meet the desired conditions for each of the land use zones. The WCC indicators with the most potential for improvement include:

- Water quality – actions taken to remove 303(d) listed waters; actions taken to reduce water quality problems, such as abandoned mine lands (AML) waste, drinking water advisories, and Best Management Practices (BMP) failures causing sediment delivery to waters from Forest Service actions.
- Water Quantity – direct removal of water diversions, modifying water diversions to provide pass through flows, removal of groundwater extraction and developed spring facilities.
- Riparian vegetation restoration – plantings in association with removal of facilities.
- Native species restoration – re-introduction of aquatic species.
- Exotic species removal – known populations can be controlled through aquatic species removal actions.
- Road density reduction through decommissioning – identified roads and trails not suitable would be removed and the land recontoured or restored to allow natural recovery.
- Road maintenance – reduced footprint and use would reduce need to constant maintenance.
- Soil erosion restoration – removal of facilities would include restoring erosion scars.

A number of indicators will be indirectly affected by a change in land use zone, primarily due to less intense future uses by recreation and non-recreation users. With less human impact, more natural recovery will take place. Indicators are as follows:

- Habitat fragmentation – less general disturbance to animals.
- Large woody debris – a more natural fire regime should provide adequate woody debris.
- Channel shape and function – removal and upgrade of the road and trail system will allow for less unnatural incision; reduced use of the riparian area will allow for vegetative infill to support channel function.
- Life form presence – less general disturbance to animals.
- Native species recovery – as the watershed reaches a more natural state from reduced use, native species will have less pressure to natural recovery.
- Exotic and/or invasive species reduction - less non-native species introduction due to reduced human and domesticated animal presence.
- Riparian vegetation recovery – less disturbance and use of riparian areas should allow for riparian vegetation to provide more seral stages and support riparian dependent species.
- Soil Productivity – should improve through natural fire recovery.

- Soil erosion recovery – Reduced use and impact, especially associated with roads, trails, and developed facilities, should allow for natural vegetative recovery of the landscape; fire recovery and improved forest health will reduce soil erosion.
- Terrestrial invasive species – Extent and rate of spread should be reduced by reducing human use of the areas.

When the watersheds were rated in Fiscal Year 2011, some of the overall ratings placed the watershed on the border between two of the conditions. In those cases, the analysis captured whether continued actions under the suitable uses of the current LUZ would trend a watershed to an improved WCC rating. IRA boundaries are governed by landscape features that are different than watershed boundaries. Therefore, an assessment has been made as to how much land area of each particular watershed would be affected by a changing LUZ. Given the large range for a FAIR score under the WCC, IRAs affecting a small portion of a watershed are unlikely to change the overall WCC for that watershed. Trends in WCC ratings under the LUZ alternatives are summarized by forest in Tables 80 to 85. Detailed IRA analyses are available as part of the project record in Appendix 2.

### **Alternative 1 – No Action**

An assessment was made as to whether current ecological restoration activities would change the current WCC to an improved level in Alternative 1. Under the current LMP, unauthorized roads and trails are to be repaired when identified under current Forest policy. Certain indicators, such as natural wildfire recovery and related aspects of recovery such as soil erosion and vegetation condition, would continue to improve regardless of the LUZ. The Forest Plan goals, standards, and guidelines list desired conditions for watersheds, including work to remove listed waters from the 303(d) list of the Clean Water Act. As shown in Tables 80 to 85, the overall WCC remain stable, with a few watersheds improving and several watersheds degrading.

### **Alternatives 2 – Proposed Action and Alternative 2a –Preferred Alternative**

The effects of Alternative 2 and 2a in terms of WCC are the same since the small increase in RW acres under the Preferred Alternative would not result in any change to the WCC. The increased allocation to BCNM and RW LUZs should reduce the intensity of future uses within the IRAs in Alternatives 2 and 2a. As developed recreation use and dispersed use on roads and trails by motorized traffic is decreased, watershed condition is generally increased. Water and riparian resource quantity and quality would be expected to improve because of the continued emphasis on prevention of watershed degradation, in combination with less developed recreation and more watershed restoration.

Aquatic habitat, aquatic biota, and riparian vegetation indicators would improve in more restrictive LUZs through the reduction of habitat fragmentation and general disturbance to animals. With less habitat fragmentation there should be an overall increase in species diversity of certain specialist species and an overall decrease in disturbance-dependent generalist species. There may also be fewer non-native species in areas less visited by humans and their pets (assuming that the non-native species are not already established in the area). This potential improvement could be reduced by spread of non-native species from adjacent private lands. Riparian vegetation would most likely improve with less disturbance and provide more suitable habitat for riparian dependent species like southwestern willow flycatcher and least Bell's vireo (see the Wildlife section of this SEIS). Reduction in new roads and trails and removal of

unneded or unauthorized roads and trails would reduce the density, proximity to water, and the need for continued maintenance of roads. Soil erosion problems would be addressed which would allow natural restoration due to less continued disturbance. Temporary facilities would be removed when no longer needed, reducing associated roads as well.

As shown in Tables 80 to 85, the overall WCC ratings remain stable, with several watersheds improving and one watershed degrading.

**Alternative 3 – Recommended Wilderness Emphasis**

Additional restrictions on activities are implemented with a Recommended Wilderness (RW) designation, including a reduction in various special uses, restrictions on mountain bikes, new minerals exploration and development, renewable energy resources, and public harvesting of wood products. These restrictions further reduce use in RW areas and would lead to the natural recovery of watershed condition. Roads and trails associated with uses that are no longer supported would be decommissioned, enhancing watershed restoration. Program direction emphasizes habitat restoration.

As shown in Tables 80 to 85, the overall WCC ratings show an improving trend, particularly on the Los Padres National Forest.

**Table 80. ANF - WCC ratings by IRA and HUC 6 watershed-**

IRA Name	HUC 6s	Current WCC	ALT 1	ALT 2/2a	ALT 3
Red Mountain	Elizabeth Lake Canyon (180701020304)	2	2	2	2
	San Francisquito Canyon (180701020402)	2	2/3	2	2
	Lower Castaic Creek (180701020306)	3	3	2	2
Salt Creek	Upper Castaic Creek (180701020303)	2	2	2	2
Tule	Elizabeth Lake Canyon (180701020304)	2	2	2	2
Sespe - Frazier	Lake Piru-Piru Creek (180701020603)	2	2	2	1
	Fish Creek-Piru Creek (180701020602)	2	2	2	2
West Fork/Westfork	Lower West Fork San Gabriel River (180701060105)	3	3	3	2
	Upper West Fork San Gabriel River (180701060102)	2	2	2	2
Fish Canyon	Upper Castaic Creek (180701020303)	2	2	2	2
	Fish Canyon (180701020302)	2	2	1	1



IRA Name	HUC 6s	Current WCC	ALT 1	ALT 2/2a	ALT 3
	Elizabeth Lake Canyon (180701020304)	2	2	2	2
<b>Total number of watershed improved</b>			<b>0/-1</b>	<b>2</b>	<b>4</b>

**Table 81. CNF – WCC 1 ratings Under all Alternatives by IRA and HUC 6 watershed**

IRA	HUC6 Watersheds in WCC 1
Caliente	Agua Caliente Creek, Canada Aguanga-San Luis Rey River
Coldwater	Bedford Wash-Temescal Wash, Dawson Canyon-Temescal Wash
Trabuco	Middle San Juan Creek
Cedar Creek	Cedar Creek
Eagle Peak	Cedar Creek, Ritchie Creek-San Diego River, Boulder Creek
No Name	Conejos Creek
Sill Hill	Boulder Creek, Conejos Creek
Upper San Diego River	Ritchie Creek-San Diego River

**Table 82. CNF – non-WCC 1 ratings by IRA and HUC 6 watersheds**

IRA Name	HUC 6s	Current WCC	ALT 1	ALT 2/2a	ALT 3
Barker Valley	West Fork San Luis Rey River (180703030103)	2	2	2	2
	Matagual Creek-San Luis Rey River (180703030105)	2	2	1	1
Ladd	Upper Santiago Creek (180702030901)	2	2	2	2
Trabuco	Arroyo Trabuco (180703010103)	2	2	2	2
	Upper San Juan Creek (180703010101)	2	2	2	1
Eagle Peak	El Capitan Reservoir-San Diego River (180703040505)	2	2	2	2
No Name	El Capitan Reservoir-San Diego River (180703040505)	2	2	2	2
<b>Total number of watershed improved</b>			<b>0</b>	<b>1</b>	<b>2</b>

**Table 83. LPNF – WCC 1 ratings Under All Alternatives by IRA and HUC 6 watershed**

IRA	HUC 6 Watershed in WCC 1
Antimony	Santiago Creek, San Emigdio Creek, Los Lobos Creek, Pleito Creek, Tecuya Creek
Black Mountain	Middle Branch Huerhuero Creek, East Branch Huerhuero Creek, Toro Creek-Salinas River

<b>IRA</b>	<b>HUC 6 Watershed in WCC 1</b>
Cuyama	Burges Canyon-Cuyama River, Rancho Nuevo Creek
Dry Lakes	Abadi Creek-Sespe Creek, Matilija Creek
Fox Mountain	Schoolhouse Canyon-Cuyama River, Wells Creek, Bitter Creek-Cuyama River, Branch Canyon Wash, Salisbury Canyon Wash, Castro Canyon, Tennison Canyon-Cuyama River
Garcia Mountain	Upper Huansa River, Arroyo Seco, Big Spring-Salinas River
Machesna Mountain	Big Spring-Salinas River, Rogers Creek-San Juan Creek, Placer Creek-San Juan Creek
Sawmill-Badlands	Burges Canyon-Cuyama River, Apache Canyon, Oak Creek-Cuyama River, Reyes Creek-Cuyama River, Dry Canyon, Wagon Road Canyon
Sespe-Frazier	Reyes Creek-Cuyama River, Los Alamos Creek, Abadi Creek-Sespe Creek, Boulder Creek-Sespe Creek, Santa Paula Creek, Alamo Creek, Seymour Creek
Spoor Canyon	Mustang Canyon-Cuyama River
Tequepis	Quiota Creek-Santa Ynez River, Kelly Creek-Santa Ynez River
White Ledge	Carpenteria Creek-Frontal Santa Barbara Channel, Coyote Creek, Matilija Creek

**Table 84. LPNF – non WCC 1 ratings by IRA and HUC 6 watershed**

<b>IRA Name</b>	<b>HUC 6s</b>	<b>Current WCC</b>	<b>ALT 1</b>	<b>ALT 2/2a</b>	<b>ALT 3</b>
Black Mountain	Pozo Creek (180600050101)	1	1/2	1/2	1
	Shell Creek (180600040302)	1	1/2	1	1
Cuyama	Santa Barbara Canyon (180600070202)	2	2	2	1
	Deer Park Canyon – Cuyama River (180600070110)	2	2	2	1
Diablo	Agua Caliente Canyon (180600100201)	2	2	2	1
Dry Lakes	Tule Creek – Sespe Creek (180701020702)	2	2	2	1
	North Fork Matilija Creek (180701010102)	1	1/2	1	1
Fox Mountain	Santa Barbara Canyon (180600070202)	2	2	2	1
	Cottonwood Canyon-Cuyama River (180600070305)	2	2	2	2

IRA Name	HUC 6s	Current WCC	ALT 1	ALT 2/2a	ALT 3
Juncal	Juncal Canyon-Santa Ynez River (180600100202)	2	2	2	1
Machesna Mountain	Pozo Creek (180600050101)	1	1/2	1/2	1
	Navajo Creek (180600040105)	2	2	2	2
	Upper Alamo Creek (180600070401)	2	2	2	1
Madulce-Buckhorn	Indian Creek (180600100102)	2	1	1	1
	Gibraltar Reservoir – Santa Ynez River (180600100401)	2	2/3	2	2
Quatal	Quatal Canyon (180600070108)	1	1/2	1	1
Sawmill - Badlands	Quatal Canyon (180600070108)	1	1/2	1	1
	Lockwood Creek (180701020504)	2	2	2	2
Sespe - Frazier	Snowy Creek-Piru Creek (180701020505)	2	2	1	1
	Cedar Creek-Piru Creek (180701020502)	2	1	1	1
	Lockwood Creek (180701020504)	2	2	2	2
	Lake Piru-Piru Creek (180701020603)	2	2	2	1
	Tule Creek – Sespe Creek (180701020702)	2	2	2	1
	Tar Creek (180701020704)	2	2	2	2
Spoor Canyon	Clear Creek-Cuyama River (180600070602)	2	2	2	2
	Powell Canyon (180600070304)	2	1	1	1
White Ledge	Juncal Canyon-Santa Ynez River (180600100202)	2	2	2	1
<b>Total number of watershed improved</b>			<b>-5 to +3</b>	<b>-1 to +4</b>	<b>+11</b>

**Table 85. SBNF = WCC ratings by IRA and HUC 6 watershed**

IRA Name	HUC 6s	Current WCC	ALT 1	ALT 2/2a	ALT 3
Cactus Springs B	Headwaters Palm Canyon Wash (181002010201)	2	2	1	1
Cucamonga B	North Fork Lytle Creek (180702030302)	2	2	2	2
	Cajon Wash-Lytle Creek (180702030305)	3	3	3	3
Cucamonga C	Upper Cucamonga Creek (180702030704)	2	2	1	1
Pyramid Peak A	Upper Palm Canyon Wash (181002010202)	2	1	1	2
Pyramid Peak A	Headwaters Palm Canyon Wash (181002010201)	2	2	1	1
Raywood Flat B	Mill Creek (180702030501)	2	2	2	2
Raywood Flat B	South Fork Whitewater River (181002010301)	2	1	1	1
Raywood Flat B	Yucapia Creek (180702030402)	1	1	1	1
Raywood Flat B	Little Gorgonio Creek (180702030401)	2	2	2	2
Raywood Flat B	Headwaters San Gorgonio River (181002010102)	2	2	2	2
Number of improved watershed			2	4	4

## Air

None of the alternatives considered during the plan revision were expected to substantially change the existing long-term, large scale, forest-wide ambient air quality (FEIS page 452). However, ongoing national forest management activities do have the potential to adversely impact short-term, local air quality and regional visibility and ozone concentrations. Wildland fires have an effect on regional air quality, particularly regional haze. National forest management has an influence on many sources of air pollution generated on the national forests, including the amount, specific location and timing of wildland prescribed fires, recreation vehicle traffic, special-uses, size and type of recreation sites, and use and speed on unpaved

national forest roadways. These factors are evaluated at the project level and mitigation is applied to reduce air quality impacts.

None of the alternatives considered in this SEIS are expected to change the trends and effects described in the FEIS for the current LMP (Alternative 4a). The following section describes the effects related to engine emissions, fugitive dust, prescribed fire, and wildfire based on the air quality analysis in the FEIS.

### **Alternative 1 – No Action**

Implementation of the current plan is expected to increase engine emissions as driving on the national forests increases during the planning period. Fugitive dust associated with driving on unpaved dirt roads is also expected to increase under the current LMP. Both prescribed fire and wildfire are expected to increase under the current LMP.

### **Alternative 2 – Proposed Action and Alternative 2a - Preferred Alternative**

The effects of implementing Alternatives 2 or 2a on air quality would be the same as implementing Alternative 1. Alternatives 2 and 2a maintain the existing road system, so the increase in engine emissions described in the current LMP would continue for Alternatives 2 and 2a. The same rationale would apply to fugitive dust, which is generated by driving on unpaved roads. There would be little change in fugitive dust from the current conditions under Alternatives 2 and 2a. Use of prescribed fire and the incident of wildfire would also increase for Alternatives 2 and 2a to the same degree as Alternative 1.

### **Alternative 3 – Recommended Wilderness Emphasis**

Implementation of Alternative 3 would have the same effects on air quality as Alternatives 1, 2 and 2a. Alternative 3 maintains the majority of the road system so any changes in emissions or driving patterns would be negligible. Use of prescribed fire and the incident of wildfire would also increase for Alternative 3 to the same degree as Alternative 1.

## **Special Interest Areas**

Special interest areas are identified across all land use zone allocations. Changes in LUZ allocations could affect the management of the SIA if the suitable uses allowed within an area were not compatible with the purposes for which the SIA was designated.

### **Alternative 1 – No Action**

The distribution of land use zones within the SIAs of the planning area under the current LMP is shown in Table 86.

**Table 86. Alternative 1 LUZ allocations by Forest for the SIAs within the planning area.**

	Alternative 1 – Acres of SIA by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Liebre Mountain	133	813	3,317		28			4,291
<b>Cleveland</b>								
Chiquito Basin			726		11			737
West Fork San Luis Rey			218					218
<b>Los Padres</b>								
Dry Lakes			406					406
Foster Bear Ponds	71							71
Mono Basin			339	272				611
Mt. Pinos Summit	388					5		393
Quatal Canyon	465					4		469
Sierra Madre		3,608						3,608

**Alternative 2 and 2a – Proposed Action and Preferred Alternative**

The distribution of land use zones within the SIAs under Alternative 2 and 2a is shown in Table 87. Most SIAs move into more restrictive LUZ allocations. The BCNM LUZ provides for a variety of uses at low intensity levels and those restrictions should not conflict with purposes of the SIAs in those areas. The activities allowed within an RW LUZ should be compatible with the botanical goals set for Liebre Mountain SIA and the fisheries goals established for the West Fork San Luis Rey SIA. The overall impact should be minimal.

**Table 87. Alternative 2 LUZ allocations by Forest for the SIAs within the planning area.**

	Alternative 2/2a – Acres of SIA by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Liebre Mountain	11	10	6				4,265	4,291
<b>Cleveland</b>								
Chiquito Basin			726		11			737
West Fork San Luis Rey							218	218
<b>Los Padres</b>								
Dry Lakes			406					406
Foster Bear Ponds			71					71
Mono Basin			339	272				611
Mt. Pinos Summit	388					5		393
Quatal Canyon	6		459			4		469
Sierra Madre		10	2,961					3,608

### Alternative 3 – Recommended Wilderness Emphasis

The distribution of land use zones within the SIAs under Alternative 3 is shown in Table 88. Most SIAs move into the more restrictive RW allocation. The activities allowed within an RW LUZ should be compatible with the botanical goals set for Liebre Mountain, Chiquito Basin, Dry Lakes; the fisheries goals established for the West Fork San Luis Rey; and the geomorphic setting of Quatal Canyon SIAs. The overall impact for these areas should be minimal.

Forest Service policy directs that interpretive activities take place outside of wilderness areas. Research and education that is compatible with wilderness management is allowed. There could be a conflict with the interpretation purposes associated with the Mono Basin SIA and the cultural purposes associated with the Sierra Madre SIA. The overlap with the Mono Basin SIA is small (7%), so this potential conflict would be minimal. The overlap with the Sierra Madre SIA is substantial (62%), increasing the potential for conflict. The Los Padres National Forest LMP (Part 2 page 100) notes that the Sierra Madre SIA was excluded from the adjacent San Rafael Wilderness to allow for continued essential access to the Sierra Madre Ridge. Alternative 3 maintains motorized access to Sierra Madre Ridge, reducing the potential conflict.

**Table 88. Alternative 3 LUZ allocations by Forest for the SIAs within the planning area.**

	Alternative 3 – Acres of SIA by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Liebre Mountain	11	10					4,270	4,291
<b>Cleveland</b>								
Chiquito Basin					11		726	737
West Fork San Luis Rey							218	218
<b>Los Padres</b>								
Dry Lakes							406	406
Foster Bear Ponds			71					71
Mono Basin				272			339	611
Mt. Pinos Summit	388					5		393
Quatal Canyon						4	465	469
Sierra Madre							3,608	3,608

## Social and Economic Environment

### Heritage Resources

Applicable law, policy and direction provide the basis for the protection of cultural resources. Future management activities tied to the land-use designations could affect cultural resources in all alternatives. However, this plan amendment does not authorize implementation of any management activities. Actions would adhere to direction found in the 2006 LMP and the suitable uses within the LUZs are the indicator for potential effects to the cultural resources. Activities on federal lands are subject to the regulations outlined in Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and as promulgated by 36 CFR 800.

Each national forest (as part of the Region 5 Section 106 Programmatic Agreement with the State Historic Preservation Officer and the Advisory Council on Historic Preservation) has an existing Section 110 Plan. This plan is designed to allow the national forests to meet their responsibilities outlined in Section 110 of the NHPA, and includes procedures to inventory, protect, enhance and monitor the cultural resources on the national forests.

The following assumptions apply in the assessment of the environmental consequences of the activities allowed under the alternatives:

- Cultural resources would be managed according to existing laws, regulations and programmatic agreements to protect these resources according to societal expectations.
- Active management would provide the best opportunities for identifying, physically protecting, and interpreting cultural resources.
- Passive management, in restricting access and the range of ground-disturbing management activities permissible in a LUZ, may reduce the chances for direct adverse effects on cultural resources.
- Public interest and support for heritage resource management will increase, including that of American Indian tribes, groups and individuals.

Unlike most other resource values, cultural resources are basically non-renewable resources. These are fragile resources, susceptible to effects from natural causes (such as erosion) and human causes (fire, vandalism), which result in deterioration, damage and, ultimately, their elimination. Effects on some cultural resources (such as the upgrading of wooden windows in an historical building with non-compatible aluminum materials) can be reversed; however, until that happens, the effect is ongoing and potentially adverse. Overall, non-beneficial effects usually result in compromising the nature of the heritage resource and may affect its eligibility for inclusion in the National Register of Historic Places.

The significance of cultural resources, particularly historical and traditional cultural properties (areas of special religious or spiritual significance where traditional practices are performed), often depends on their context in the larger landscape as much as their immediate physical features. Activities that occur beyond the physical boundaries of the heritage resource can affect the cultural resources if they affect the larger, landscape-level context. In addition, the architectural and landscape features of buildings, compounds, roads, bridges, dams and other structures can be adversely affected by alterations.

As a rule, any activity that causes ground disturbance (disturbance to the soil matrix that contains the heritage resource) has the potential to adversely affect cultural resources, both directly and indirectly. This results in changes to the physical attributes of the resources that, in turn, compromise the integrity of the heritage resource and its context. Its context (the spatial relationship between the various artifacts, features and components of the heritage resource) is what is scientifically studied and interpreted and is the basis for the site significance determination. This effect is irreparable and considered adverse. Even a scientific archaeological excavation has an adverse effect because it is destroying the integrity and context of the heritage resource by removing its artifacts, features and components.

Effects that can damage cultural resources or their setting can result both from natural events or processes and human activities. Indirect effects can result from changed visitor use patterns and improved access that brings more visitors, resulting in the deterioration or loss of the site. There



is also the potential for previously unknown sites to be discovered through exposure and/or damaged by land use activities that involve surface disturbance. Effects from project-specific activities are easier to identify and manage for through appropriate mitigation measures. Non-project-specific activities (such as unauthorized off-road vehicle use or wildland fires) have the greatest potential to adversely affect cultural resources, as these activities do not lend themselves to identification, anticipation or mitigation.

The intensity of impacts on cultural resources can be described as negligible, minor, moderate or major. Negligible impacts are those that result in barely perceptible changes in the important properties of a heritage resource or cultural landscape. Minor impacts are perceptible and noticeable. Moderate impacts are sufficient to cause a noticeable but not substantial change in the important characteristics of cultural resources. Major impacts result in substantial and highly noticeable changes in the important characteristics of cultural resources. Duration plays a key role in the overall effect; impacts of minor intensity over a long duration may have the same effect on the characteristics of cultural resources as would impacts of moderate intensity over a short duration.

Measures that reduce the intensity of the impact are appropriate under the requirements of NEPA; however, under NHPA, as defined by the implementing regulations for Section 106, the effects remain adverse. Therefore, measures to address impacts under NEPA may not be sufficient to address the effects under NHPA. The Secretary of the Interior has published regulations designed for the preservation, restoration and rehabilitation of cultural resources. The Region 5 Section 106 Programmatic Agreement provides a list of standard protection measures that can be used within the context of fast-track coordination with 36 CFR 800. Ultimately, the universal mitigation measure will always be in compliance with the vast array of historic preservation legislation and mandates.

Mitigation measures for effects include pre-planning survey of all proposed activities and sites; survey of all existing structures not previously surveyed for cultural resources; and use of standard protection measures such as project redesign, relocation and monitoring to protect the affected cultural resources. Education of project workers and the national forest user in regards to site damage or vandalism would also be an effective mitigation measure.

In all four Alternatives, the existing LMP land use zone definitions, the suitable uses identified within the individual land use zones, and the plan standards remain the same. Under Alternative 1 (the No Action alternative), the current land use zones would remain for the southern California national forests.

Alternative 2 (the Proposed Action) re-zones the majority of the land use zone allocations to Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW). Existing RW land use zones were maintained. Areas not capable or suitable for wilderness were either retained in their current LUZ, or moved towards a more restrictive one. This change results in restricting the range of permitted management activities in the LUZ, creating more protective prescriptions.

Alternative 2a (Preferred Alternative) follows the design criteria and features of Alternative 2, with boundary adjustment modifications that include the expansion of RW acreage and reduction of BCNM acreage. As in Alternative 2, this change results in restricting the range of permitted management activities in the LUZ, creating more protective prescriptions.

Alternative 3 rezones the majority of the land use zones allocated within the IRAs to RW. As such, like the Proposed Alternative, Alternative 3 moves Land Use allocations towards more restrictive management activities.

In all alternatives, Heritage management activities such as inventory, analysis, stabilization/restoration, and public interpretation are retained. To some degree, the alternatives will have irreversible commitments of cultural resources; the magnitude and degree of that commitment varies by the difference in acreage for those land use zones for which activities that result in ground disturbance are suitable (See Tables 59 to 62.). Although no specific management activities are proposed, effects to cultural resources could result from future actions suitable under the LMP.

The most obvious effect of these designations is that they reduce the potential range of activities that can affect cultural resources – both harmful and helpful. It is apparent that Alternatives 2, 2a, and 3 would have the least effect to cultural resources as the BC and DAI acres are the lowest, and hence provide the most protection from possibly damaging land use activities. Contrastingly, however, management emphasis of some areas (like wilderness) may result in the proposed removal of non-compatible items such as evidence of human presence (historical buildings), which would be considered an adverse effect. As such, Alternatives 2, 2a, and 3 could cause future management difficulties in regards to certain structures in wilderness.

An indirect effect is that some designations could possibly limit the type of historic preservation activities to be used as part of the sound heritage management program (for example, limiting the range of equipment for a rehabilitation project). It may even restrict access and response time for other heritage management activities at sites. Since the knowledge of the national forests' cultural resource inventory is based primarily on the program support of other activities (through Section 106), the restriction of those other activities reduces the potential to increase the knowledge of the cultural resources in these areas. Alternatives 2, 2a, and 3 may entail the larger number of indirect effects, as they also restrict access and may prohibit management options that would enhance and protect cultural resources.

## **Tribal and Native American Interests**

In all alternatives, management activities proposed to implement the LMP could affect the values that tribes and Native American groups and individuals may have for the land within the boundaries of the national forests. The analysis of potential effects to values held to be of importance to the Native American community is based on the range of suitable uses established by the LMP.

The following assumptions apply in the assessment of the environmental consequences of the activities allowed under the alternatives:

- National forest planners view the national forests for suitable land uses emphasizing resource values, while Native Americans view the national forests as a portion of their spiritual values, lifeways and beliefs.
- Native people have a deep connectedness with the natural environment of the national forests.

- With open space around the national forests disappearing at a rapid rate because of urbanization, the Native American community will look to the national forests to meet their needs.

In all three Alternatives, the existing LMP land use zone definitions, the suitable uses identified within the individual land use zones, and the plan standards remain the same. Under Alternative 1 (the No Action alternative), the current land use zones would remain for the southern California national forests. The effects identified in the existing Plan Revision will carry over into this alternative effects analysis.

Alternatives 2 and 2a zone the majority of the land use allocations to Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW). Existing RW land use zones are maintained. Areas not capable or suitable for wilderness are either retained in their current LUZ, or moved towards a more restrictive one. This change trends towards restricting the range of permitted management activities in the LUZ, creating more protective prescriptions.

Alternative 3 zones the majority of the land uses allocated within the IRAs to RW. As such, like Alternatives 2 and 2a, Alternative 3 moves land use allocations towards more restrictions regarding management activities.

The acreage for BC decreases significantly in Alternatives 2, 2a, and 3 which potentially reduces the activities that may affect values held to be of importance to the Native American community.

All alternatives accommodate traditional and contemporary uses of the national forests with all alternatives focusing in varying degrees on the conservation, protection and restoration of resources of concern. It is expected that opportunities for contribution of traditional knowledge to sustainable national forest management would increase under all alternatives as would government-to-government relations.

The current lack of information is the limiting factor in the assessment of environmental consequences of national forest activities on those items of concern to local tribes, Native American groups and individuals. The desired information centers on the type of resources used (plants, stone, etc.), resource locations, and the relationship of the natural environment to native people. Fundamental baseline inventory data is limited and usually available on a project-specific basis and not on a landscape level. This is further accentuated by the hesitancy of the American Indian population to share information with the national forests out of concern that the information will not remain confidential and the resources of concern will be damaged or destroyed.

Native Americans view their space within the national forests as a participant, not as a manipulator or manager, which is the view of non-indigenous cultures. Any alteration, such as ground disturbance, that is permanent and not in harmony with the environment would be an adverse effect in the Native American view. As mentioned before, Alternatives 2, 2a, and 3 reduces the range of activities that can affect Native American values.

They are also concerned about impacts on heritage resources that are associated with their ancestors and other indigenous people who lived in the area of the national forests. The discussion of environmental consequences and effects in the Heritage Resources section that is applicable to Native American heritage resources applies here and will not be repeated. Growing emphasis on Native American input to the management of the national forests has the possibility of broadening the understanding and awareness of historical ecosystem management.

Any activity that results in alteration or the introduction of non-natural elements into the natural environment could be an issue of concern to the tribes and to Native American groups and individuals. Any activity that will promote, improve, preserve or restore the natural environment and natural features, or promote the fabric of harmonious environment interactions, would probably not be viewed as an issue of concern. Alternatives 2, 2a, and 3 promote more preservation of the natural environment and natural features than Alternative 1.

Any activity that promotes the ability to access the natural open space of the national forests would be more acceptable to tribes and Native American groups and individuals, compared to those activities or management directions that restrict access to the natural open space of the national forests. Alternative 1 would maintain the same level of access to the natural open space of the national forests while Alternatives 2, 2a, and 3 potentially reduce the ability to access those areas. The LMP Record of Decision (ROD) for each of the Forests states the Forest “will maintain appropriate access to sacred and ceremonial sites and to tribal traditional use areas” (ROD, page 4).

The Native American community feels a close association with cultural and historical landscapes. Any activity that promotes scenery management and aims to maintain the feeling of the natural landscape would have a beneficial effect. Alternative 1 maintains the current natural appearing landscape while Alternatives 2, 2a, and 3 increase the acres managed for natural appearance. There would be opportunities for the maintenance of existing and potential historical and cultural landscapes, and traditional cultural properties, through consultation with appropriate tribes, Native American groups and individuals.

Alternatives that increase the acreage of special designations (in this case the RW LUZ) and increase the natural appearance of the landscape are of greater value for spiritual, ceremonial and other uses by Native Americans. On a whole, those areas that are not zoned for special designations are usually assigned to a land use zone that may allow a range of activities that could affect values held to be of importance by the local Native American community (such as Back Country LUZ). Alternative 1 has the highest non-special designation zoned acres while Alternatives 2, 2a, and 3 will increase the BCNM and RW acreage on each of the Forests. However, special designations such as RW (which is managed as wilderness) may actually reduce or limit the type of access into areas, which may affect the ability of the Native American community to access areas for the practice of traditional and contemporary lifeways.

Many ceremonial locations, cemeteries, traditional gathering areas and heritage resource sites located in the national forests contribute to the American Indian community's way of life, identity, traditional practices and cohesiveness. Roads sometimes provide essential access to many of these areas. Reduction of roads limits access by contemporary cultures to areas of cultural concern and importance; however, the Back Country Motorized Use Restricted (BCMUR) zone in the LMP is designed to allow tribal access to areas of cultural concern and importance while still restricting access to other publics. However, the acreage allocation in BCMUR is reduced significantly in Alternatives 2, 2a, and 3 while more restrictive land allocations in terms of road access like RW increases significantly. However, less tangibly, but no less important, roads often affect areas that American Indians or other groups consider sacred, because roads may limit people's ability to conduct ceremonies that require privacy and may even diminish the sacred qualities of such places (Gucinski and others 2000).

The loss of road or vehicular access may increase reliance on trails to provide access into areas which possibly create conflicts between national forest users desiring open space and Native Americans desiring areas to use for ceremonies that rely on privacy and solitude.

Measures to address access issues include the identification of areas of concern, including the roads themselves, to local groups and individuals. Obtaining information about sacred places and other places of concern from some American Indian groups is difficult because Forest Service styles of communication and negotiation are often incompatible with these cultures, and revealing sacred values and identifying sacred places to outsiders may be thought to imperil the values in need of protection. The use of Native Americans as part of Forest Service information requests might help facilitate the collaboration between groups and sharing of information critical to help determine sound management decisions.

## **Recreation**

Recreation in the planning area is managed in accordance with the Forest Plan land use zones, settings, strategies and standards. Alternative 1 has an emphasis consistent with the current 2006 Forest Plan Revision and no changes are proposed. But recreation would be affected by proposed changes in land use zones in Alternatives 2, 2a, and 3, primarily by the addition of Backcountry Non-Motorized and Recommended Wilderness land use zone acreage as shown in Table 63. Approximately two thirds of the inventoried roadless areas analyzed in this document are found on the Los Padres National Forest.

Recreation activities have different effects on the natural and social environment depending on timing and intensity of the use, sensitivity of the location and specific behaviors of recreationists. Furthermore, recreation is just part of the equation when considering what these changes are as natural events and human-caused impacts also play a role. Social conflicts among users may increase as available space decreases, where incompatible uses are not separated, or where desired opportunities are not available. This could occur as land use zones change in Alternatives 2, 2a and 3 to Backcountry Non-Motorized and Recommended Wilderness.

A component of that change would be a reduction of motorized and (in Recommended Wilderness) mechanized recreational opportunities. But other opportunities for primitive non-motorized and non-mechanized recreation would then increase in roadless areas proposed for Backcountry Non-Motorized or Recommended Wilderness land use zones. These areas would thus offer the best prospects for solitude, the absence of motorized or mechanized vehicles and the absence of human developments; all of which are rare qualities in southern California.

It is important to note that areas recommended for wilderness in this decision would be managed by the Forest Service in a similar manner as existing wilderness until they are either designated as wilderness by Congress or changed in a future analysis to a different land use zone.

Therefore, each of the three action alternatives have some advantages for certain groups of recreationists while at the same time being less desirable for other groups. Impacts from recreation on natural resources may also occur. The alternatives in this analysis vary in the potential for these changes and impacts depending on which activities are allowed as well as where and when as described in the topics below.

## Settings

Recreation Opportunity Spectrum (ROS) classifications reflect the overall theme and character of settings as expressed by the Forest Plan land use zones. Recreation may substantially affect the natural setting (depending on facilities), site mitigation, user behavior and density, site capability, design and many other factors. As such the nature of recreation use would then vary by alternative.

Alternative 1 has an emphasis consistent with the current 2006 Forest Plan Revision and there would be no change from existing ROS settings. A decision to reallocate portions of the southern California national forests to different land use zones in Alternatives 2, 2a and 3 would affect ROS settings. Some opportunities for mechanized, motorized and developed recreation would be foregone in the roadless areas classified as backcountry non-motorized and recommended wilderness land use zones. Conversely, opportunities for non-mechanized, non-motorized and more dispersed and primitive recreation would increase. Table 89 provides land use zones and their mapping rule model for ROS classification in alternative comparison.

**Table 89. Recreational Opportunity Spectrum**

Land Use Zone	ROS
Existing and recommended wilderness (EW/RW)	Primitive
Back Country Non-Motorized (BCNM)	Semi-primitive non-motorized
Back Country Motorized Use Restricted (BCMUR)	Semi-primitive non-motorized with some Roaded Natural and Semi-primitive motorized
Back Country (BC)	Semi-primitive motorized, Roaded Natural, with some Rural
Developed Area Intermix (DAI)	Rural and Roaded Natural
Critical Biological (CB)	Varies
Experimental Forest (EF)	Semi-primitive non-motorized and Semi-primitive motorized

**Alternative 1 - No Action** retains the current mix of Backcountry Non-Motorized and Recommended Wilderness land use zones with no change of recreation opportunities (Table 90). Most (76%) of the land use zone acreage on the Los Padres National Forest in this alternative is Backcountry and Backcountry Motorized Use Restricted.

**Table 90. Mix of BCNM and RW by Forest within the planning area for Alternative 1**

National Forest	BCNM	RW
Angeles	89%	0%
Cleveland	82%	0%
Los Padres	21%	1%
San Bernardino	41%	37%

**Alternative 2–Proposed Action and Alternative 2a - Preferred Alternative** propose more Backcountry non-motorized (especially on the Los Padres National Forest) and Recommended Wilderness (especially on the Angeles and Cleveland National Forests where new wilderness areas are being recommended) land use zones (Table 91). There would be an increase of semi-primitive and primitive recreation opportunities and a decrease in semi-primitive motorized and roaded natural recreation opportunities. Alternatives 2 and 2a provide more natural, open space

setting preservation while retaining much of the recreation character that maintains the niche of the national forest landscapes (as described in the 2006 Forest Plan) in providing recreation opportunities.

**Table 91. Mix of BCNM and RW by Forest within the planning area for Alternatives 2 and 2a**

National Forest	BCNM	RW
Angeles	39%	59%
Cleveland	42%	50%
Los Padres	91%	1%
San Bernardino	60%	37%

**Alternative 3 – Recommended Wilderness Emphasis** proposes significantly more Recommended Wilderness land use zones on all forests (Table 92). New wilderness areas are recommended within the Angeles and Cleveland National Forests. There would be an increase in semi-primitive and primitive recreation opportunities. Along with this would be a decrease in semi-primitive motorized and roaded natural recreation opportunities. Alternative 3 provides the most natural, open space setting preservation while retaining some of the recreation character that maintains the niche of the national forest landscapes in providing recreation opportunities.

**Table 92. Mix of BCNM and RW by Forest within the planning area for Alternative 3**

National Forest	BCNM	RW
Angeles	1%	96%
Cleveland	7%	86%
Los Padres	14%	82%
San Bernardino	0%	96%

**Visitor Use, Access, Participation, Satisfaction and Tourism**

Visitor use has grown tremendously in the past fifty years and, even though there has been a reduction recently, visitor use is projected to continue to grow over the long-term in all four southern California national forests. Intense use will continue at many existing sites and areas, and new and additional use will occur at those sites and areas that are now only lightly being used or not used at all. As popular sites and areas fill to their capacity levels, more use will shift from the heavier summer season to spring, fall and winter. Use may also shift to off-forest locations. Visitors will become more diverse and have changing expectations of recreation opportunities. It is expected that currently popular southern California short-term day-use recreation activities, including driving for pleasure, picnicking, hiking, nature viewing and water play, would continue to increase more than traditional backcountry extended-duration activities such as backpacking, dispersed camping, fishing, and hunting. Motorized back road and off-highway vehicle use as well as (mechanized) mountain biking are projected to remain popular. Visitor participation is expected to vary by alternative depending upon the type of land use zone access and restrictions but total use is not expected to change.

The mix of opportunities would generally remain the same for Alternative 1. There would be a greater emphasis on non-mechanized and non-motorized recreation in Alternatives 2 and 2a and especially Alternative 3. Some mechanized (mountain biking) and/or motorized recreation opportunities would be lost or foregone in Alternatives 2 and 2a and more so in Alternative 3 as system road, motorized trail, and/or multi-use non-motorized trail systems would be re-classified

and/or reduced in size. Mountain biking would not be permitted on system trails in Recommended Wilderness land use zones. Refer to the trails discussion and tables in this chapter for more details.

There are about 173 total miles of national forests system roads within the roadless areas being analyzed, including roads authorized by permit. Of this, there would be a loss of approximately 3 miles (1% of the total) of permitted roads to Recommended Wilderness land use zone on the Cleveland National Forest in Alternatives 2 and 2a. There would be a loss of approximately 9 miles of county, Forest Service and permitted roads to recommended wilderness on the Cleveland National Forest and a loss of approximately 32.5 miles of permitted roads to recommended wilderness at the Los Padres National Forest (27% of the total) in Alternative 3. Motorized trails are located only on the Los Padres National Forest in the roadless areas being analyzed, and almost none of them are allocated to a Recommended Wilderness land use zone in Alternatives 2, 2a and 3. Access for people with disabilities would vary correspondingly by alternative. It should be noted that wheel chairs or other mobility devices, even one that is battery powered, are exempt from the mechanized and motorized equipment restrictions in Wilderness Areas. Forest system road and trail mileage by forest and alternative are listed in Tables 101, 104, 107 and 109.

It is possible that visitation to Recommended Wilderness land use zones could increase as more people seek the values for which they were established. Corresponding changes in recreation-associated impacts to recommended wilderness resources may be expected. However, it should be noted that visitation to existing designated wilderness has actually decreased since the early 2000s in the Angeles, Cleveland and Los Padres National Forests. It increased within the San Bernardino National Forest. Therefore, visitation to existing or recommended wilderness is not expected to substantially increase during the planning period regardless of alternative in this analysis.

Visitor use, participation and satisfaction levels would vary by alternative but are difficult to quantitatively describe and predict because of their inherent complexity and unpredictability. Recreation visitation and use is expected to increase over time in all three alternatives; however, the location, type, rate and intensity vary in complex and interconnected ways. Visitor satisfaction throughout all alternatives would be mixed, mostly depending on which activities would be available to what user groups and how well the national forests accommodate relocation of motorized and mechanized recreation opportunities.

National forest recreation often generates tourism spending in local communities. Changes in recreational use due to a reduction in motorized and mechanized access and use or conversely increased non-motorized/mechanized use could affect local economies. Forest system road and trail mileage by forest and alternative is listed in Tables 101 through 111. Differences among alternatives may affect local and regional tourism and economies because of varying levels of recreation opportunities provided by alternative, although the anticipated effects are relatively minor and do not occur on a larger regional or national scale.

### **Developed Recreation**

Ribbonwood Campground, located in the Cactus Springs B Inventoried Roadless Area in the San Jacinto Ranger District of the San Bernardino National Forest is the only existing developed recreation facility in this analysis. It is relatively small and lightly (seasonally) used by visitors. The status of and use in this campground would not change in any alternative as it would remain



within the backcountry land use zone. It may be reconstructed or rehabilitated over time as use and funding guide the Forest.

Few of the roadless areas have the potential for new developed recreation facilities and none are projected to be constructed there at this time. Therefore the limitations of developed recreation infrastructure in these roadless areas would not affect this type of use in any alternative.

## **Dispersed Recreation**

### Camping

As described in the 2006 Forest Plans, the entire Los Padres National Forest has the largest potential dispersed vehicle camping opportunity, followed by the San Bernardino, Cleveland and the Angeles. Dispersed vehicle camping would remain the same in Alternatives 2 and 2a. There could be some minor changes in Alternative 3 because there would be less motorized access on Forest Service roads than in Alternative 1 as displayed in Table 63 above. Dispersed non-vehicular camping would remain the same or increase. The quantity, quality and distribution of this opportunity depends upon the mix of land use zones available by alternative as well as local decisions made by each national forest based upon public safety, resource protection and fire danger.

Angeles National Forest: Generally allowed forest-wide except where posted signs specify otherwise. No change in any alternative.

Cleveland National Forest: Remote camping is not allowed within the Trabuco, Ladd, or Coldwater Inventoried Roadless Areas. Remote camping is allowed within other inventoried roadless areas and the undeveloped areas subject to restrictions. No change in any alternative.

Los Padres National Forest: Generally allowed forest-wide including at numerous designated trail camps throughout the forest. No change in any alternative.

San Bernardino National Forest: Generally allowed throughout much of the forest with some use restrictions; a combination of designated sites, areas, and yellow post sites. No change in any alternative.

It is anticipated that the current trend of mostly light use and fewer visitors participating over time in this activity would continue. All alternatives provide sufficient dispersed vehicle camping capacity. A few site-specific areas would continue to receive more intensive use and impacts than many others, especially as overflow to developed sites during summer, weekends, holidays and hunting season.

### Driving for Pleasure, Wildlife and Nature Viewing, Snow Play, Water Play, Hang-Gliding and Rock Climbing

These dispersed recreation opportunities offer vibrant outdoor experiences to a mostly urban southern California in which visitors may relax, enjoy nature and participate in personal challenge and sport. However, there are also impacts associated with these activities. These may include littering, sanitation, soil compaction and erosion, trampling of vegetation, wildfire starts, and disturbance of riparian, stream, and lake ecosystems. Other impacts are social in nature, such as the perception of overcrowding or parking and trail conflicts with other visitors or residents. Capacity is often difficult to quantify and depends on variables specific to a given site.

Visitors would generally continue to enjoy driving for pleasure outside of inventoried roadless areas under all alternatives. There are about 170 total miles of National Forest System roads within the roadless areas being analyzed. There would be no change to the roads open to the public in Alternatives 2 and 2a. There would be a loss of about 3 miles of road open to the public to Recommended Wilderness at the Cleveland National Forest in Alternative 3.

Wildlife and nature viewing opportunities are widespread and unrestricted. They would continue to be present in all alternatives. However, there would be somewhat less mechanized and motorized access in Alternatives 2, 2a, and 3 as described above.

Snow play and water play are also widespread and mostly unrestricted in all alternatives. There would be somewhat less mechanized and motorized access in Alternatives 2, 2a, and 3 as described above for visitors to enjoy these activities. No new snow play or water play site needs were identified in the Forest Plan in any these roadless areas.

Popular, informal hang-gliding take-off spots in the analysis roadless areas are located in:

Los Padres National Forest - Pine Mountain, Nordhoff Ridge/Peak and Chief Peak (Sespe-Frazier IRA) – all spots are available with existing motorized access outside of the roadless area.

San Bernardino National Forest - Cucamonga (Cucamonga B IRA) – no current motorized access.

Motorized access to the Cucamonga hang-gliding take-off spot would not be permitted in lands classified as recommended wilderness Alternatives 2, 2a, and 3.

Rock climbing is popular in the Eagle Peak Inventoried Roadless Area in the Cleveland National Forest. There is no motorized access to locations for this recreation activity. This use would not change under any alternative.

#### Recreational Target Shooting

Recreational target shooting areas in the southern California national forests would remain unchanged in Alternative 1 but would be affected by changed land use zones in Alternatives 2, 2a, and 3. The LUZs for authorized target shooting ranges would not be affected by either Alternative 2, 2a, or 3. Target shooting ranges and areas are not suitable uses in existing or recommended wilderness. Environmental protection, safety and disturbance of the public and wildlife remain concerns.

The ‘A Place to Shoot’ concession-operated target shooting site in the Angeles National Forest in and adjacent to the Red Mountain Inventoried Roadless Area would continue to operate according to the terms and conditions of the existing authorization and in compliance with all applicable regulation, policy and Forest Plan direction. There would be no changes to existing recreational target shooting opportunities elsewhere on the Forest.

The open shooting area along the Palomar Divide Road in the Cleveland National Forest, located in part within the Barker Valley Inventoried Roadless Area, would be affected in Alternatives 2, 2a, and 3. Approximately 30% this area would be in non-conformance with the land use zones under these alternatives (recommended wilderness) because recreational target shooting is inconsistent with the Recommended Wilderness land use zone. There would be no changes to existing recreational target shooting opportunities elsewhere on the Cleveland National Forest from this amendment.

Roadless areas within the Los Padres National Forest currently open to recreational target shooting would be closed to that use if they are changed to Recommended Wilderness land use zones in Alternative 3 (339,886 acres).

There would be no changes to existing recreational target shooting opportunities within the San Bernardino National Forest by any alternative, since no shooting is allowed within the IRAs addressed in the SEIS.

### Hunting and Fishing

Executive Order (EO) 13443 directs federal agencies to facilitate the expansion and enhancement of hunting opportunities, to consider the effect of their actions on trends in hunting participation, and to consider the economic and recreational value of hunting. A Federal Lands Hunting, Fishing, and Shooting Sports Roundtable Memorandum of Understanding was developed in 2006 by the Forest Service to facilitate implementation of the EO.

Hunting and fishing would continue in all alternatives but the type of access to these recreational opportunities would vary. There would be no access changes from present conditions in Alternative 1. Because Alternatives 2, 2a and 3 have different land use zone acreage, mechanized and motorized access to existing hunting and fishing opportunities in these roadless areas analyzed would decrease as described above. Foot and equestrian access would remain unchanged in all alternatives. Forest system road and trail mileage by forest and alternative is listed in Tables 101 to 111. Hunting and fishing may increase over time at a somewhat lower rate in Alternatives 2, 2a and 3 than in Alternative 1. But the quality of the fishing and hunting experience may eventually become higher in Alternative 2 and Alternative 3 than in Alternative 1 because of a potential decrease in relative crowding, harvest, vehicle disturbance or harassment and poaching resulting from less mechanized and motorized access.

### **Recreation Special Use Authorizations**

There are few changes to the few recreation opportunities offered in partnership with commercial and non-commercial entities through special use authorizations within the analysis roadless areas. The competitive ultra-trail running recreation events held in the Trabuco Inventoried Roadless Area (and events in other roadless areas classified as RW land use zones) would not be suitable activities in Alternative 3. This would affect the organizer and participants who would have to find other locations for their event.

### Recreation Residences

There is no difference among alternatives with regard to effects on recreation residences as there are none of them in the analysis roadless areas.

### Winter Sports

Downhill skiing, snowboarding and Nordic skiing opportunities do not vary by alternative. The two acres of the Mt. Baldy Ski Lifts special use permit (administered by the Angeles National Forest) that overlaps the northwestern corner of the Cucamonga B Inventoried Roadless Area within the San Bernardino National Forest (including an access road and water pond) would become a BCMUR land use zone in Alternative 2a to allow that existing use to continue. There are no other existing winter sports special use authorizations in the analysis roadless areas. Some very small amount of individual use may occur but it would not be affected by any alternative. Most roadless areas in this analysis are in lower elevations.

## **Conservation Education, Volunteers and Partnerships**

Conservation education, volunteers and partnership programs and projects would continue to be an emphasis in all alternatives. Partnerships with other agencies, groups and private support organizations are a useful method to meet recreation demand in recommended wilderness as well as the entire forests. These programs and projects remain extraordinarily beneficial to the Forest Service, partners and the public. Conservation education opportunities vary slightly by alternative with potentially more wilderness-related opportunities in Alternatives 2, 2a, and 3.

## **Wild and Scenic Rivers**

Wild, scenic and recreational river use would continue in all alternatives as directed by the 1968 Wild and Scenic Rivers Act and subsequent river-specific legislation. They guide Forest Service administration in a manner that protects and enhances a river's outstandingly remarkable natural and cultural values. And they also allow existing uses of a river to continue as well as future uses to be considered as long as the existing or proposed use does not conflict with protecting river values.

**Wild Rivers** are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

**Scenic Rivers** are free of impoundments, with shorelines or watersheds still largely primitive and largely undeveloped but accessible in places by roads.

**Recreational Rivers** are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Two rivers within the Settlement Agreement inventoried roadless areas have been designated as wild and scenic in the 2009 Omnibus Public Land Management Act since the four southern California national forest LMPs were adopted in 2006. They are Piru Creek (7.25 total miles in the Angeles and Los Padres National Forests) and Palm Canyon Creek (8.1 total miles in the San Bernardino National Forest). Portions of these designated rivers and of the already designated Sespe Creek in the Los Padres National Forest are located within the boundaries of the roadless areas being analyzed. Their land use zone classification would vary by alternative as shown in Table 93.

**Table 93. Acres of Designated Wild and Scenic Rivers by Forest, LUZ and Alternative**

	Alt 1			Alts 2/2a			Alt 3		
	Rec	Scenic	Wild	Rec	Scenic	Wild	Rec	Scenic	Wild
<b>Angeles</b>									
Piru Creek	32			32			32		
BCMUR	32			32			32		
<b>Los Padres</b>									
Sespe Creek		290			290			290	
BCNM		263			263			0	
CB		18			18			18	
EW		9			9			9	
RW								263	
<b>San Bernardino</b>									
Palm Canyon Cr			2292			2292			2292
BCMUR			207						
BCNM			1356			1562			
RW			730			730			2292

As displayed in this table, there would be no change to designated river land use zones for the Angeles National Forest in any alternative. Los Padres National Forest designated river land use zones would not vary between Alternatives 1, 2, and 2a but would change to mostly Recommended Wilderness in Alternative 3. San Bernardino National Forest designated river land use zones would change to mostly Backcountry Non-Motorized in Alternatives 2 and 2a and all Recommended Wilderness in Alternative 3. In general, changes in land use zones from less restrictive to more restrictive (for example, from Backcountry to Recommended Wilderness) could have a positive influence on designated wild and scenic river water quality and many of the outstandingly remarkable values. However, this change might also affect public access to some of these rivers, especially those designated recreational or scenic.

No agency management changes are anticipated in any designated river segment due to potential land use zone revisions.

The Forest Plans also classified several rivers within these roadless areas as eligible and suitable for wild and scenic river designation. Their land use zone classification would vary by alternative as shown in Table 94.

**Table 94. Acres of Eligible and Suitable Wild and Scenic Rivers by Forest and LUZ**

	Alternative 1							Alternatives 2/2a							Alternative 3							
	BC	BCMUR	BCNM	CB	DAI	EW	RW	BC	BCMUR	BCNM	CB	DAI	EW	RW	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>																						
San Francisquito Creek																						
Rec			129							129							7					121
San Gabriel River - W. Fork																						
Rec	29	501	388		27	8		16	902			27	8		16	2			27	8	900	
<b>Cleveland</b>																						
San Luis Rey River - W. Fork																						
Scenic		17	1543											1561								1561
<b>Los Padres</b>																						
Piru Creek																						
Rec	6		396					2	401						2							401
Scenic	5530		16	103		5		403	5143	103		5		358		2987	103			5	2201	
Wild	1255		4			2		1	9	1248			2		1		1254				2	4
Sespe Creek																						
Rec	1190		492					165		1516					165							1516
Scenic		5	248						5	248						5						248
<b>San Bernardino</b>																						
Lytle Creek - Mid. Fork																						
Scenic							174							174								174
Whitewater River - E. Fork of S. Fork																						
Wild		42				4			42				4			42					4	
Whitewater River - S. Fork																						
Wild	1	228				1			228	1			1			228					1	1

As displayed in this table, the Angeles National Forest would have less “Eligible River” Backcountry Motorized Use Restricted and more Backcountry Non-Motorized land use zone acreage in Alternatives 2, 2a, and 3. The Cleveland National Forest would have less “Eligible River” Backcountry Non-Motorized and more Recommended Wilderness in Alternatives 2, 2a, and 3. Los Padres National Forest suitable river Backcountry Non-Motorized land use zone acreage would increase significantly in Alternatives 2, 2a, and 3. There would be essentially no change for the San Bernardino National Forest “Eligible River” land use zones in Alternatives 2, 2a, and 3. In general, changes in land use zones from less restrictive to more restrictive (for example, from Backcountry to Recommended Wilderness) could have a positive influence on eligible and suitable wild and scenic river water quality and many of the outstandingly remarkable values. However, this change might also affect public access to some of these rivers, especially those classified as eligible and suitable recreational or scenic.

To manage eligible and suitable rivers for their potential inclusion into the National Wild and Scenic River System, the forest plans provide direction to protect free-flowing character, water quality, outstandingly remarkable values and recommended classification.

No agency management changes are anticipated at these forests in any eligible or suitable river segment due to potential land use zone revisions.

## **Wilderness**

Management of designated wilderness is governed by the 1964 Wilderness Act and subsequent wilderness-specific legislation. The four forests also manage recommended wilderness land use zones in a manner similar to designated wilderness until they are either designated wilderness by Congress or changed in a future analysis to a different land use zone. Southern California national forest Settlement Agreement inventoried roadless areas would continue to be managed in accordance with the Roadless Rule, Forest Plan land use zones, strategies and standards. However, they could be affected by changes in these land use zones. No changes are proposed in Alternative 1. A mixture of Backcountry Non-Motorized and Recommended Wilderness is proposed in Alternatives 2 and 2a and substantial Recommended Wilderness is proposed in Alternative 3.

The inventoried roadless area wilderness evaluation process for this analysis (see Appendix 2) was guided by Forest Service Manual 2320, Forest Service Handbook 1909.12, Chapter 70 and the FEIS (particularly FEIS Appendix D).

Management activities here are limited to those that support wilderness values. The Forest Service generally allows natural processes to occur with few restrictions or restraints. When management actions are taken, the most common type of wilderness management is the control of visitation and recreation. Commercial uses are administered by special-use authorizations and associated operation plans. Because direction for wilderness is already specified in law, regulation, agency policy and area-specific management implementation schedules, management of existing designated wilderness would not vary by alternative.

There are 1,241,913 acres of existing designated wilderness in the four forests, about 35% of their total land base. An additional 19,154 acres (less than 1% of their total land base) are included as Recommended Wilderness land use zone in Alternative 1, 106,122 acres (about 3%) are included as Recommended Wilderness land use zone in Alternative 2, 110,107 acres (about

3%) are included as Recommended Wilderness land use zone in Alternative 2a, and 533,104 acres (about 15%) are included as Recommended Wilderness land use zone in Alternative 3. Recommended Wilderness land use zone acreage (by percentage of all inventoried roadless areas analyzed in this document) varies by forest and alternative are summarized in Table 95.

**Table 95. RW Percentage Within the Planning Area by Forest and Alternative**

National Forest	Alternative 1	Alternative 2/2a	Alternative 3
Angeles	0%	59%	96%
Cleveland	0%	50%	86%
Los Padres	1%	1%	82%
San Bernardino	37%	37%	96%

Alternative 1 proposes no land use zone changes from current Forest Plan guidance.

Alternative 2 proposes about a 3% increase in Recommended Wilderness land use zones for the inventoried roadless areas in this analysis. The Fish Canyon and Salt Creek Inventoried Roadless Areas would be combined to create the proposed approximately 40,000 acre Fish Canyon Recommended Wilderness in the Angeles National Forest. On the Cleveland National Forest, the proposed approximately 23,000 acre Eagle Peak Recommended Wilderness would include portions of the Eagle Peak, Sill Hill, and No Name Inventoried Roadless Areas along with portions of the Cedar Creek and Upper San Diego River Undeveloped Areas. The approximately 11,000 acre Barker Valley and 5,000 acre Caliente Recommended Wilderness areas are also proposed in the Cleveland National Forest. Minimal additions are proposed for the Los Padres National Forest. The San Bernardino National Forest would expand the existing Cucamonga, San Gorgonio and San Jacinto Wilderness.

Alternative 2a also proposes about a 3% increase in Recommended Wilderness land use zones for the inventoried roadless areas in this analysis, 3,985 more acres than Alternative 2.

Alternative 3 proposes about 15% more Recommended Wilderness land use zones in all forests, with most inventoried roadless areas in the planning area recommended as wilderness. That would move national forest management in these units towards a much stronger emphasis on wilderness management over many other activities. It would also emphasize the protection of wildlife and plant species and habitat.

**Effects of other activities on wilderness**

Values in recommended wilderness land use zones could be affected by some of the management and activities described below. Effects would differ depending upon the values that are present in a particular area as well as the nature and duration of the management and/or activity.

Wildlife

Wildlife management, including area restrictions, seasonal closures during sensitive periods and prescribed burning to improve habitats, can directly affect wilderness values by potentially displacing wilderness visitors to other areas. Threatened, endangered, proposed, candidate and sensitive species management would be consistent in all alternatives because of the Endangered Species Act, agency direction and other policies. More of these impacts would occur in those places with major threatened, endangered, proposed, candidate and sensitive species populations. Activities likely to be affected could include closure and/or relocation of trails and campsites.



Indirect recreational benefits from wildlife management could include increased hunter, angler and wildlife viewer satisfaction.

Alternative 1 has a wilderness emphasis consistent with the current forest plans.

Alternatives 2, 2a, and 3 place more emphasis on the long-term protection of wildlife and plants as well as threatened, endangered, proposed, candidate and sensitive species programs because they reduce motorized and mechanized access.

### Vegetation and wildland fire

Vegetation and wildland fire management may both directly and indirectly affect wilderness values. Vegetative harvest activities near wilderness boundaries have the potential to create short-term disturbances that may change the user's perception of being in a remote area due to visual and auditory disturbances. They also have the potential to affect wilderness use levels by creating potential motorized trespass entry points and increase adverse ecosystem effects, including noxious weed introductions.

Wilderness characteristics, including solitude, primitive recreation experiences and natural landscapes, may be affected by wildland fire suppression and prescribed fire. Risks to life and values are ascertained and choices for suppression techniques are then made considering the effects on these wilderness characteristics. Minimum impact suppression techniques (MIST) are employed. Potential effects could include a temporary loss of vegetation, risk of type conversion with overly frequent fires, a reduction in water quality due to sedimentation, a permanent loss of cultural resources, a temporary loss of grazing opportunities, increased smoke pollution and a short- to long-term perceived loss in scenic quality. Indirect effects of fire use may include a temporary loss of wildlife and their habitat for some species or additional habitat for others. Fires burning in wilderness could change visitor use patterns and cause inconvenience. Wilderness visitors could expect temporary access restrictions during periods of high fire danger. Recreation use of burned-over areas may drop for a period of years until ecosystem recovery achieves a more advanced stage. Intense fire in dense stands of trees could increase long-term trail maintenance needs due to the downfall of snags across trails and in campsites.

Alternative 1 has a wilderness emphasis consistent with the current forest plans.

Alternatives 2, 2a, and especially Alternative 3 recommend additional wilderness land use zones. Appropriate management and processes would be used to manage vegetation and fire and their subsequent effects in these areas. Southern California ecosystems are currently well represented in existing designated wilderness. New recommended wilderness land use zones would primarily increase low to mid-elevation chaparral ecosystems.

### Recreation

Visitation to recommended wilderness land use zones may change somewhat as more people become aware of their values. Corresponding changes in recreation-associated impacts to recommended wilderness resources may be expected. Based on recent Forest Service National Visitor Use Monitoring (NVUM) data, visitation to most existing southern California national forest wildernesses is not necessarily expected to increase over time. It has actually decreased since the early 2000s in the Angeles, Cleveland and Los Padres National Forests (but increased in the San Bernardino National Forest). Therefore visitation to existing or recommended wilderness is not expected to substantially increase regardless of alternative in this analysis.

Most wilderness use occurs as day hiking, backpacking and equestrian use. Recreation-associated impacts to sensitive wilderness resources on trails and at campsites may also be expected, especially in the more popular wildernesses near urban areas. Much of the wilderness backcountry would remain unvisited because of lack of system trails, steep terrain and dense vegetation. Additional areas recommended as wilderness, especially if eventually designated, could redistribute some of this use. In some cases the visitation in existing relatively undisturbed areas could increase as a result of that wilderness designation.

Alternative 1 has a wilderness emphasis consistent with the current forest plans and there would be no changes to recreation management. Alternatives 2, and 2a and especially Alternative 3 have the most opportunity for additional new areas to provide wilderness experiences.

It is important to recognize that additions to the National Wilderness Preservation System carry significant intangible effects that are difficult to quantify. This includes values for an appreciation of open spaces and natural beauty; for nature's healing to the human imagination and spirit; for solitude, serenity, and spiritual renewal; and simply for the knowledge that wild places are wild and would remain that way forever.

## **Landscape Management**

In accordance with current LMP direction for all four forests, the Scenery Management System (SMS) is the tool used for integrating the benefits, values, desires, and preferences regarding aesthetics and scenery for all levels of land and resource management planning. People are concerned about the quality of their environment and the aesthetic values of landscapes, particularly the scenery and spiritual values. The proposed planning actions could indirectly, over time, modify the conditions within Key Places on the Forests, but would have no direct effect to them or to the current Scenic Attractiveness Classes (SACs). The effects of these three Alternatives will be compared based on the changes to the assigned scenic integrity objectives (SIOs).

### **Effects on Scenic Integrity Objectives**

Scenic integrity objectives represent the minimum levels of scenic integrity to which landscapes are managed. The SMS recognizes the interdependence of aesthetics and ecological systems and promotes natural-appearing landscapes. In most alternatives, landscapes would be managed to maintain a natural appearance, characterized by scenic integrity objectives of high and very high. Generally speaking, in alternatives where there is an increase in RW and/or BCNM, the corresponding SIOs result in landscapes that are more natural-appearing.

As discussed in the Recreation section of this chapter, there is a direct correlation between LUZs and ROS settings. In turn there is also a direct correlation between ROS settings and SIOs. An area managed for a primitive ROS (RW LUZs) is usually managed for a very high SIO, while an area managed for a Semi-primitive non-motorized ROS (BCNM LUZs) is usually managed for a high SIO. Table 96 provides a model for the mapping correlations between specific land use zones, recreation opportunity spectrum settings and scenic integrity objectives.

**Table 96. Scenic Integrity Objective Mapping Rules Based on LUZ and ROS**

LUZ*	ROS	Scenic Integrity Objective		
		Very High	High	Moderate
<b>Existing and recommended wilderness (EW/RW)</b>	<b>Primitive (P)</b>	Norm	Inconsistent	Unacceptable
<b>Back Country Non-Motorized (BCNM)</b>	<b>Semi-Primitive Non-Motorized (SPNM)</b>	Fully Compatible	Norm	Inconsistent
<p><b>NOTE:</b> All the other LUZ's fall under multiple ROS/SIO settings and can remain as mapped, without being affected by the proposed Alternatives**</p>	<b>Semi-Primitive Motorized (SPM)</b>	Fully Compatible	Fully Compatible	Norm***
	<b>Roaded Natural-Appearing (RN)</b>	Fully Compatible	Norm	Norm
	<b>Rural (R)</b>	Fully Compatible	Fully Compatible	Norm
	<b>Urban (U)</b>	Fully Compatible	Fully Compatible	Fully Compatible

\*EW/RW and BCNM are the only LUZs under the LMP that are generally mapped and classified under one specific ROS/SIO

\*\*Under the current LMPs (FEIS Alternative 4a), none of the four Forests have mapped SIOs below Moderate. Therefore the results for lower SIOs (i.e. Low or Very Low) were excluded from this table, as they do not apply.

\*\*\*Norm from sensitive roads and trails.

The LMP establishes Scenic Integrity Objectives (SIOs) for all National Forest System lands within the planning area. Areas currently zoned as Recommended Wilderness and all existing wilderness areas have very high SIOs. Adding additional areas of RW would change the SIOs for those areas that are not already mapped RW to very high. Likewise, as displayed in Table 96, areas currently zoned as Back Country Non-Motorized (BCNM) would be mapped with a high SIO. The addition of any BCNM land use zones would change SIOs for those areas not already mapped with a high scenic integrity objective.

The most obvious general effects on scenic resources are derived from unplanned natural occurrences, such as wildfire. Landscape management strives to meet the public's scenery expectations for the management of national forest landscapes.

Unplanned wildland fires have long-term and short-term effects. Based on the historical size of wildland fires, burned areas can visually overwhelm visitors when viewed in the foreground and middleground distance zones, and can be prominent in background panoramas. The long-term scenery effects of unplanned wildland fire relate to the introduction of non-characteristic lines from mechanical-equipment use during suppression and from high-intensity, stand-replacing wildland fires that typically reduce vegetation species composition and age-class diversity. Short-term effects relate to the size of the burned areas: large burns can visually dominate views in the foreground and middleground zones. Due to their unpredictability, the effects of unplanned wildland fires have not been assessed. In addition, these effects would be the same for all alternatives.

**Alternative 1 – No Action**

National forest management would maintain its present course and would retain the current mix of Backcountry Non-Motorized and Recommended Wilderness land use zones with no change in

their current scenic integrity objectives under Alternative 1. The LUZs within the planning area would be largely managed to maintain a natural undeveloped appearance, with assigned SIOs of high and very high. About fifteen percent of the planning area would maintain its currently assigned SIO of moderate. Under No Action, 4% of the planning area IRAs are being managed with a very high SIO (unaltered), 81% with a high SIO (appears unaltered), and 15% managed with a moderate SIO (slightly altered). Table 97 summarizes the current SIO designations under Alternative 1, for the RW and BCNM land use zones within the planning area.

**Table 97. Alternative 1 SIO in BCNM/RW LUZs by Forest Within the Planning Area**

SIO	Angeles		Cleveland		Los Padres		San Bernardino	
	BCNM acres	RW acres	BCNM acres	RW acres	BCNM acres	RW acres	BCNM acres	RW acres
Very High		N/A		N/A		5,306	1	18,218
High	51,411	N/A	63,048	N/A	74,053		20,041	
Moderate	14,976	N/A	5,240	N/A	12,468		289	

**Alternative 2 – Proposed Action**

The change of LUZs on the Angeles and the Cleveland would add a combined total of 82,583 acres to the existing RW under Alternative 2. The SIO for those additional areas would change from high to very high in order to be consistent with management of RW objectives. Alternative 2 would also reduce the amount of BCNM acreage in the Angeles and the Cleveland, but would increase it on the San Bernardino, and significantly increase it on the Los Padres. Of those acres, 76,713 are currently managed for a moderate SIO. These areas would change to a high SIO in order to be consistent with the scenery management objectives for BCNM zones. With those changes, the planning area would be managed to maintain a more natural undeveloped appearance, with assigned SIOs of high and very high. Less than one percent of the planning area (2,849 acres) would maintain its currently assigned SIO of moderate. This should result in 17% of the planning area being managed with a very high SIO (unaltered), 82% with a high SIO (appears unaltered), and less than 1% with a moderate SIO (slightly altered). Table 98 summarizes the SIO designations under Alternative 2 for the RW and BCNM land use zones within the planning area.

**Table 98. Alternative 2 SIO (acres) in BCNM/RW LUZs Within the Planning Area**

SIO	Angeles		Cleveland		Los Padres		San Bernardino	
	BCNM	RW	BCNM	RW	BCNM	RW	BCNM	RW
Very High		41,065		41,517		5,306		18,218
High	30,892		34,972		379,809		29,688	

### Alternative 2a – Preferred Alternative

The change of LUZs on the Angeles and the Cleveland would add a combined total of 85,923 acres to the existing RW under Alternative 2a. The SIO for those additional areas would change from high to very high in order to be consistent with management of RW objectives. Alternative 2a would also reduce the amount of BCNM acreage in the Angeles and the Cleveland, but would increase it in the San Bernardino, and significantly increase it in the Los Padres. Of those acres, 78,155 are currently managed for a moderate SIO. These areas would change to a high SIO in order to be consistent with the scenery management objectives for BCNM zones. With those changes, the planning area would be managed to maintain a more natural undeveloped appearance, with assigned SIOs of high and very high. Less than one percent of the planning area (2,191 acres) would maintain its currently assigned SIO of moderate. Although the acres of very high SIO are slightly higher than Alternative 2, the overall change is similar.

Approximately 17% of the planning area being managed with a very high SIO (unaltered), 82% with a high SIO (appears unaltered), and less than 1% with a moderate SIO (slightly altered). Table 99 summarizes the SIO designations under Alternative 2a for the RW and BCNM land use zones within the planning area.

**Table 99. Alternative 2a SIO (acres) in BCNM/RW LUZs Within the Planning Area**

SIO	Angeles		Cleveland		Los Padres		San Bernardino	
	BCNM	RW	BCNM	RW	BCNM	RW	BCNM	RW
Very High		42,333		43,591		5,306		18,859
High	30,572		34,730		379,802		29,688	

### Alternative 3 – Recommended Wilderness Emphasis

Alternative 3 reflects significantly more RW land use zones on all four forests, which would in turn increase the amount of land managed to a very high SIO level. The SIO of those RW areas would change to very high in order to be consistent with management of RW objectives. Alternative 3 significantly reduces the BCNM zone designations within the planning area, shifting areas now mapped with Moderate and High SIOs to Very High. With these changes, the majority of the planning area would be managed to maintain an unaltered appearance, with a major increase in very high SIOs. Less than one percent of the planning area (1,103 acres) would maintain its currently assigned SIO of moderate. This should result in 85% of the planning area being managed with a very high SIO (unaltered), 15% with a high SIO (appears unaltered), and less than 1% with a moderate SIO (slightly altered). Table 100 summarizes the SIO designations under Alternative 3 for the RW and BCNM land use zones within the planning area.

**Table 100. Alternative 3 SIO (acres) for BCNM/RW LUZs Within the Planning Area**

SIO	Angeles		Cleveland		Los Padres		San Bernardino	
	BCNM	RW	BCNM	RW	BCNM	RW	BCNM	RW
Very High		72,432		72,368		339,885		48,390
High	1,033		6,116		59,727		155	

## Law Enforcement

The three issues associated with law enforcement and emergency response relate directly to access. Refer to the transportation section for a more detailed description of the effects of the alternatives on the roads and trails in the area. This section will describe how those changes in access relate to law enforcement and emergency response issues.

### Alternative 1 - No Action

Implementation of Alternative 1 would have no change in the existing law enforcement or emergency response situation. The remote nature of the IRAs and their susceptibility to illegal activities because of that remote nature would not change. Access for law enforcement would remain the same, providing the same opportunity for detecting and preventing criminal activity and apprehending violators. Border Patrol operations would continue to be guided by the 2006 interagency MOU. Search and rescue operations would continue under the same provisions currently in place.

### Alternative 2 – Proposed Action and Alternative 2a - Preferred Alternative

Implementation of Alternatives 2 and 2a would have a minimal effect on the existing law enforcement and emergency response situation. Under Alternatives 2 and 2a, all authorized roads would remain in land use zones that provide for their continued use. The remote nature of the IRAs and their susceptibility to illegal activities would not change. The level of public use is not expected to change, reducing the potential for increased user conflicts or violations. Motorized access for law enforcement on road and trails would remain the same, providing the same opportunity for detecting and preventing criminal activity and apprehending violators.

Motorized access for non-emergency law enforcement access to Recommended Wilderness would be limited and should decrease under Alternatives 2 and 2a. Some recent wilderness legislation has provided for continued motorized access for law enforcement operations (see PL 103-433 § 103, California Desert Protection Act of 1994), and similar provisions are possible in future legislation.

Border Patrol operations would continue to be guided by the 2006 interagency MOU. Access roads within and around the IRA's that are closest to the border would remain in their current land use zones. Off-road motorized travel is authorized in emergency situations for all NFS lands under the MOU. The roadless areas adjacent to these roads would be zoned as recommended wilderness, which would limit non-emergency off-road motorized travel. Requests for administrative access for motorized patrol or security infrastructure would follow

the minimum requirement or tool analysis process described in the MOU. There should be minimal impact to Border Patrol operations in the IRAs closest to the border.

There would be minimal change to search and rescue operations. Existing motorized access along roads and trails would remain in all areas. Although most of the Eagle Peak IRA was proposed for the RW land use zone, the Cedar Falls area and the access routes to Cedar Falls were not recommended for wilderness in Alternatives 2 or 2a. If all of the Recommended Wilderness in Alternatives 2 or 2a were to become designated wilderness, motorized access to those designated wilderness areas would require additional administrative approval. These approvals are typically granted in emergency situations, and there would be a minimal effect on search and rescue operations from wilderness designation.

### **Alternative 3 – Recommended Wilderness Emphasis**

Implementation of Alternative 3 could have a slight effect on the existing access on roads and trails for law enforcement and emergency response activities. Most NFS roads would remain in land use zones that provide for their continued use under Alternative 3. Many of the permitted roads (roads authorized by special use permits or grazing permits) would be within recommended wilderness, which would limit Forest Service administrative use of those roads. The remote nature of the IRAs and their susceptibility to illegal activities would not change. The level of public use is not expected to change, reducing the potential for increased user conflicts or violations.

Motorized access for law enforcement on NFS roads would be the same for most areas, with the exception of the Eagle Peak area which proposes recommended wilderness along two roads in Alternative 3. Restricted use of these roads would decrease the overall opportunities for detecting and preventing criminal activity and apprehending violators in the Eagle Peak area.

There would be additional administrative approval required for motorized or mechanized off-road access for non-emergency law enforcement activities in RW areas that would apply to a larger area than Alternative 2. This effect would be the greatest in those IRAs with persistent illegal marijuana cultivation, including Trabuco, Ladd, and Coldwater IRAs on the Cleveland National Forest and Madulce-Buckhorn on the Los Padres National Forest. Some recent wilderness legislation has provided for continued motorized access for law enforcement operations (see PL 103-433 § 103, California Desert Protection Act of 1994), and similar provisions are possible in future legislation.

Border Patrol operations would continue to be guided by the 2006 interagency MOU. Most access roads within and around the IRAs that are closest to the border would remain in their current land use zones with the exception of the Cedar Creek road and a portion of the Eagle Peak road, which would be zoned as Recommended Wilderness. Continued motorized use of those roads would be subject to the minimum requirement or tool analysis process described in the MOU.

As in Alternatives 2 and 2a, the roadless areas within the IRAs closest to the border would be zoned as Recommended Wilderness. Non-emergency off-road motorized travel is subject to review and approval by the Forest Service. Requests for administrative access for motorized patrol or security infrastructure in Recommended Wilderness would follow the minimum requirement or tool analysis process described in the MOU. Off-road motorized travel is authorized in emergency situations for all NFS lands under the MOU.

Motorized access to those proposed 500,000 acres of Recommended Wilderness areas would require additional administrative approval. These approvals are typically granted in emergency situations and there would be a minimal effect on search and rescue operations from the RW allocation.

Existing motorized access along roads and trails would remain in most areas except for Eagle Peak area. The access routes to Cedar Falls are recommended for wilderness under Alternative 3 but the area around Cedar Falls was not recommended for wilderness. This would allow continued helicopter access to Cedar Falls without restriction but would limit future motorized access along the Eagle Peak Road.

## **Economics**

### **Alternative 1 –No Action**

There would be no change from existing conditions with the Land Use Zones No Action alternative. The analysis documented in the FEIS covers this alternative.

Economic development opportunities are limited in the IRAs due to the restrictions established in the RACR and the current LUZ allocations. While existing access roads may be maintained within the IRAs, new access roads are prohibited by the RACR unless the proposed road meets one of the exemption criteria. This additional restriction could further limit activities that might be allowed under the LMP. Existing developments would continue within the IRAs under their current authorizations.

### **Alternative 2–Proposed Action and Alternative 2a - Preferred Alternative**

The additional allocation of BCNM would have a limited impact on economic development because of the existing restrictions in the RACR. Areas proposed for RW would result in a changed condition by restricting mechanized and other uses that would be allowed in BCNM. The Land Use Zones along existing motorized access routes either didn't change or were adjusted to accommodate the continued motorized access.

There may be limitations on development opportunities in areas that are proposed for BCNM and RW allocations. Developed recreation opportunities would be decreased in RW areas. Management within newly designated RW would be more complex and would require more funding to accomplish. The opportunity for the creation of new access roads is already limited by the RACR and therefore there are no economic impacts with the designation of Land Use Zones that limit road creation opportunities.

### **Alternative 3 – Recommended Wilderness Emphasis**

All areas that met wilderness criteria were proposed for Recommended Wilderness which would remove any existing public motorized and mechanized uses in those areas. This would be more restrictive than the other alternatives. The Land Use Zones along existing motorized access or existing designations either didn't change or were adjusted to accommodate the continued motorized access and use. The opportunity for the creation of new access roads is already limited by the RACR and therefore there are no economic impacts with the designation of Land Use Zones that limit road creation opportunities.

Opportunities for development and motorized access would be limited in areas that are changed to RW. Developed recreation and mountain bike opportunities would be decreased in RW areas.



Management within newly designated RW would be more complex and would require more funding to accomplish.

## Facility Operations and Maintenance

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### Roads and Trails

Road construction and reconstruction in IRAs is subject to the Roadless Area Conservation Rule (RACR) regulations at 36 CFR Part 294 Subpart B. Road construction and reconstruction is prohibited with seven listed exceptions to the general prohibition. The exceptions address emergency situations, resource issues, and existing rights. Road construction or reconstruction for recreational access or user convenience is not allowed. The RACR does not prohibit the construction or reconstruction of motorized trails in IRAs.

Decisions about the status of individual roads and trails are made pursuant to the travel management regulations at 36 CFR Part 212 Subpart B. Those decisions must be consistent with both the RACR and LMP direction, particularly the suitability of roads as determined by the LUZ direction. The status of existing roads would not change until a specific action was evaluated under travel management. Proposals for new roads or trails would have to be consistent with both the RACR and LUZ direction. A plan amendment could be proposed to amend the LUZ requirements but a plan amendment could not lessen the RACR prohibitions.

Roads and road construction can have significant effects on the environment depending on the scale of the construction and location of the disturbance. Road construction removes vegetation, displaces and compacts soil, fragments habitat, and can contribute sediment to streams. Motorized use of roads can cause wildlife disturbance. Maintenance of roads can improve road drainage, reducing water quality effects. The presence of permanent roads could reduce an area's wilderness character and roadless area values.

With the restrictions imposed by the RACR, the potential for new road construction in the 35 IRAs and two undeveloped areas is low. Any of the other activities allowed "by exception" would need to be conducted without new road construction. In general, the action alternatives would further restrict new road and motorized trail construction in areas designated as BCNM or RW. As shown in Table 61 (suitable uses by land use zone), roads and motorized trails would not be suitable for BCNM or RW designations. Given these restrictions, impacts to other resources from new road construction would be limited to those few cases where proposed roads meet the RACR restrictions, fit within the LUZ suitability requirements, and meet other plan standards. Impacts to resources, including both roadless area values and wilderness character, if any, from the cases that may be possible under the applicable restrictions would be disclosed during the project level analysis.

Mountain bike use of trails is suitable in BCNM but is not suitable in RW. Construction and reconstruction of roads and motorized trails are suitable within the other land use zones with the exception of CB. Authorized motorized use including administrative access could be allowed by exception in BCMUR, BCNM, CB, RW and EW LUZs.

### Alternative 1 – No Action

There would be no change to the existing condition. The RACR requirements would have the greatest influence on transportation system development within the IRAs. Table 101 shows the

LUZ designations for the existing road system. There are several segments of San Diego County road S7 (for a 0.5 mile total) that overlap with the Barker Valley IRA boundary, and are mapped as BCNM in the current plan. Most of the road is in the BC zone, and the intent is to manage the road corridor as BC

There would be no effect on the trail system. Table 102 shows the miles of existing trails by LUZ.

The status of the unauthorized routes would not change under Alternative 1. Table 103 shows the miles of unauthorized routes by LUZ

The program emphasis for future transportation system improvements would not change, including the connector trail between Hungry Valley and Ballinger, the parallel trail along the Gold Hill road, and additions to the California Back Country Discovery Trail.

**Table 101. Miles of Existing Road by Forest and LUZ**

	Alternative 1 - Miles of road by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>	<b>7.4</b>	<b>1.3</b>	<b>0.7</b>		<b>2.1</b>			<b>11.4</b>
County Roads					0.3			0.3
Forest Service Roads	7.4	0.5	0.2		1.1			9.2
Permitted Roads		0.8	0.5		0.7			2.0
<b>Cleveland</b>	<b>10.0</b>	<b>11.6</b>	<b>2.5</b>		<b>1.7</b>			<b>25.8</b>
County Roads	1.0	3.2	0.5		0.1			4.7
Forest Service Roads	7.5	4.7	0.0		0.3			12.5
Permitted Roads	1.6	3.7	2.0		1.2			8.6
<b>Los Padres</b>	<b>61.5</b>	<b>49.0</b>	<b>9.8</b>	<b>0.4</b>	<b>4.8</b>	<b>0.2</b>		<b>125.8</b>
County Roads	2.2				0.7			2.9
Forest Service Roads	39.1	17.2	0.6	0.4	0.4			57.7
Permitted Roads	19.9	31.8	9.3		3.8	0.2		64.9
State Roads	0.3							0.3
<b>San Bernardino</b>	<b>5.9</b>	<b>4.4</b>	<b>0.1</b>		<b>0.3</b>		<b>0.0</b>	<b>10.7</b>
Forest Service Roads	5.9	3.6	0.1		0.3		0.0	10.0
Permitted Roads	0.0	0.7	0.0					0.8
<b>Total</b>	<b>84.8</b>	<b>66.3</b>	<b>13.1</b>	<b>0.4</b>	<b>8.9</b>	<b>0.2</b>	<b>0.0</b>	<b>173.7</b>

**Table 102. Miles of Existing Trail by Forest and LUZ**

	Alternative 1 - Trail miles by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Hiker	0.3		23.6	2.0	0.6			26.4
<b>Cleveland</b>	1.7	0.0	43.5		2.0			47.2
Bicycle	0.8		28.0		2.0			30.9
Hiker		0.0	1.5					1.5
Pack and Saddle	0.9		14.0					14.9
<b>Los Padres</b>	133.0	35.5	39.3	2.2	1.1	0.2		211.3
Four Wheel Drive	9.8					0.0		9.8
All-Terrain Vehicle	50.3	0.2			0.2			50.8
Hiker	0.0		0.3					0.3
Motorcycle	57.1	0.0			0.4	0.0		57.5
Pack and Saddle	15.8	35.3	39.0	2.2	0.5	0.2		93.0
<b>San Bernardino</b>	4.3	1.1	14.6		0.1		5.2	25.4
Hiker	0.0		3.8		0.1			4.0
Pack and Saddle	4.3	1.1	10.8				5.2	21.4
<b>Total</b>	139.0	36.6	97.4	2.2	3.2	0.2	5.2	284.0

**Table 103. Miles of Unauthorized Routes by Forest and LUZ**

	Alternative 1							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
Angeles	1.2	0.0	17.6		0.8			19.5
Cleveland	5.3	7.6	26.1	2.3	3.4			44.7
Los Padres	37.6	30.1	2.9		9.9	0.4		80.9
San Bernardino	8.4	2.6	16.1		2.2	0.0	13.4	42.7
<b>Total</b>	52.5	40.3	62.7	2.3	16.2	0.4	13.4	187.8

**Alternative 2– Proposed Action**

Alternative 2 maintains the existing LUZ designations along 200 foot wide corridors for all NFS roads shown as open on the MVUM. There would be no change to the current level of public access on the existing road and trails. Table 104 summarizes the LUZ designations for the existing road system under Alternative 2.

There are no roads open to the public that are located within the RW LUZ. One small section of a closed Forest Service road on the Angeles National Forest in the Sespe-Frazier IRA is included in a BCNM designation, and several miles of permitted road on the Los Padres National Forest would also move into a BCNM allocation. Several short segments for a total of one mile of permitted road on the Cleveland National Forest are proposed for RW. Authorized use of these roads including administrative access on permitted roads would continue subject to the terms of the permit. There are no changes to zoning associated with county roads.

Alternative 2 would maintain the program emphasis for future transportation system improvements. Alternative 2 includes a forest specific standard for the Los Padres National

Forest that would allow construction of the connector trail between Hungry Valley and Ballinger within a BCNM LUZ if the construction includes the closure of the Toad Springs trail. This standard does not authorize a specific project. Any proposal would be subject to site specific analysis and a subsequent decision. Alternative 2 maintains the opportunity for a parallel OHV trail along the Gold Hill road, and maintains the potential for additions to the California Back Country Discovery Trail along existing system roads.

San Diego County has developed a general alignment for the California Riding and Hiking Trail that crosses through a portion of the Caliente IRA. This general alignment also shares the existing Pacific Crest Trail alignment. RW zoning would not preclude a Riding and Hiking Trail but it would preclude mountain bike use. Any trail that shares an alignment with the Pacific Crest Trail would also have to exclude mountain bike use on the shared segment.

The general alignment proposed for the San Diego Trans County Trail would cross through proposed RW sections of the Eagle Peak and Sill Hill IRAs. Mountain bike use would not be suitable within these zones. There are alternate locations available for the Trans County Trail that would avoid RW zoning.

The general alignment proposed for the San Diego River Park Regional trail is in an area proposed for BCMUR. All non-motorized uses including mountain bikes would be suitable within that zone.

**Table 104. Miles of Existing Roads by Forest and LUZ Under Alternative 2**

	Alternative 2 - Miles of road by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>	<b>7.4</b>	<b>1.3</b>	<b>0.9</b>		<b>1.9</b>			<b>11.4</b>
County Roads					0.3			0.3
Forest Service Roads	7.4	0.5	0.3		0.9			9.2
Permitted Roads		0.8	0.5		0.7			2.0
<b>Cleveland</b>	<b>9.9</b>	<b>11.5</b>	<b>1.9</b>		<b>1.4</b>		<b>1.1</b>	<b>25.8</b>
County Roads	0.9	3.2	0.5		0.1		0.0	4.7
Forest Service Roads	7.5	4.7	0.0		0.3		0.0	12.5
Permitted Roads	1.5	3.6	1.4		0.9		1.1	8.6
<b>Los Padres</b>	<b>52.1</b>	<b>56.6</b>	<b>11.7</b>	<b>0.4</b>	<b>4.8</b>	<b>0.2</b>		<b>125.8</b>
County Roads	2.2				0.7			2.9
Forest Service Roads	39.2	17.1	0.5	0.4	0.4			57.7
Permitted Roads	10.3	39.5	11.2		3.8	0.2		64.9
State Roads	0.3							0.3
<b>San Bernardino</b>	<b>4.7</b>	<b>4.4</b>	<b>1.2</b>		<b>0.3</b>		<b>0.0</b>	<b>10.7</b>
Forest Service Roads	4.7	3.6	1.2		0.3		0.0	10.0
Permitted Roads		0.7	0.0					0.8
<b>Total</b>	<b>74.1</b>	<b>73.8</b>	<b>15.7</b>	<b>0.4</b>	<b>8.4</b>	<b>0.2</b>	<b>1.1</b>	<b>173.7</b>

As shown in Table 105, more of the non-motorized trail system would be in BCNM or RW LUZs under Alternative 2. Mountain bike use of the trails in BCNM would not be affected. Two trails on the Cleveland National Forest would be in the RW LUZ, including the Pacific Crest National Scenic Trail (PCT) in the Caliente IRA and the Barker Spur Trail (2E02) in the Barker Valley IRA. A short segment of the PCT would also be in the RW zone on the Angeles National Forest. Mountain bike use is already prohibited on the PCT but would be precluded along the lightly used Barker Spur Trail. Narrow BCNM corridors (50 feet) were included along

designated trails within the Fish Canyon IRA to accommodate mountain bike use. Other than the one trail in the Barker Valley IRA, Alternative 2 will have no effect on mountain biking opportunities.

Alternative 2 would not have any effect on the LUZ designations for the motorized trail system on the Los Padres. There are no motorized trails designated in the planning area on the other three forests, so Alternative 2 would have no effect on the motorized trail system.

**Table 105. Miles of Existing Trails by Forest and LUZ for Alternative 2**

	Alternative 2 - Trail miles by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Hiker	0.3		23.5	2.0	0.3		0.3	26.4
<b>Cleveland</b>	0.9	1.5	29.1		1.4		14.3	47.2
Bicycle	0.4		29.1		1.4			30.9
Hiker		1.5						1.5
Pack and Saddle	0.5						14.3	14.9
<b>Los Padres</b>	120.0	11.5	76.3	2.2	1.1	0.2		211.3
Four Wheel Drive	9.8					0.0		9.8
All-terrain Vehicle	50.3	0.3			0.2			50.8
Hiker	0.0		0.3					0.3
Motorcycle	57.1	0.0			0.4	0.0		57.5
Pack and Saddle	2.9	11.2	76.1	2.2	0.5	0.2		93.0
<b>San Bernardino</b>	0.3		19.9				5.2	25.4
Hiker	0.2		3.7					4.0
Pack and Saddle	0.1		16.1				5.2	21.4
<b>Total</b>	121.2	13.0	125.3	2.2	2.5	0.2	19.6	284.0

Under Alternative 2, more of the unauthorized roads would be in BCNM and RW LUZs (Table 106). This does not change the status of the routes, but it could influence the priority for restoration work. Other factors also influence the program of work, including funding objectives and other resource conditions. Specific actions are subject to site specific analysis and beyond the scope of this plan amendment.

**Table 106. Miles of Unauthorized Routes by Forest and LUZ for Alternative 2**

	Alternative 2							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
Angeles	0.7		10.6		0.4		7.8	19.5
Cleveland	1.6	4.6	8.5	2.3	1.1		26.6	44.7
Los Padres	15.0	18.7	36.9		9.9	0.4		80.9
San Bernardino	1.4	0.9	25.7		1.3	0.0	13.4	42.7
<b>Total</b>	18.7	24.2	81.8	2.3	12.6	0.4	47.8	187.8

### Alternative 2a – Preferred Alternative

Alternative 2a has similar effects as Alternative 2 relative to the Forest Service road and motorized trail system. Alternative 2a maintains the existing LUZ designations along 200 foot wide corridors for all NFS roads shown as open on the MVUM. There would be no change to the current level of public access on the existing road and trails. Table 107 summarizes the LUZ designations for the existing road system under Alternative 2.

There are no roads open to the public that are changed to the RW LUZ. One small section of a closed Forest Service road on the Angeles National Forest in the Sespe-Frazier IRA is included in a BCNM designation and 4.2 miles of Forest Service road 7N13.1 would be in a RW designation. Several miles of permitted road on the Los Padres National Forest would also move into a BCNM allocation. Several segments, for a total of 2.9 miles, of permitted road on the Cleveland National Forest are proposed for RW, including the SDG&E powerline access road in Cedar Creek. Authorized use of these roads including administrative access on permitted roads would continue subject to the terms of the permit. There are no changes to zoning associated with county roads.

Alternative 2a would maintain the program emphasis for future transportation system improvements. Alternative 2a includes a forest specific standard for the Los Padres National Forest that would allow construction of the connector trail between Hungry Valley and Ballinger within a BCNM LUZ if the construction includes the closure of the Toad Springs trail. This standard does not authorize a specific project. Any proposal would be subject to site specific analysis and a subsequent decision. Alternative 2a maintains the opportunity for a parallel OHV trail along the Gold Hill road and maintains the potential for additions to the California Back Country Discovery Trail along existing system roads. There would be no effect on the proposed San Diego Trans-County Trail.

**Table 107. Miles of Existing Roads by Forest and LUZ Under Alternative 2a**

	Alternative 2a - Miles of road by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>	<b>3.2</b>	<b>1.3</b>	<b>0.9</b>		<b>1.9</b>		<b>4.2</b>	<b>11.4</b>
County Roads					0.3			0.3
Forest Service Roads	3.2	0.5	0.3		0.9		4.2	9.2
Permitted Roads		0.8	0.5		0.7			2.0
<b>Cleveland</b>	<b>9.9</b>	<b>9.6</b>	<b>1.9</b>		<b>1.4</b>		<b>3.0</b>	<b>25.8</b>
County Roads	0.9	3.2	0.5		0.1		0.0	4.7
Forest Service Roads	7.5	4.7	0.0		0.3		0.0	12.5
Permitted Roads	1.5	1.7	1.4		0.9		2.9	8.6
<b>Los Padres</b>	<b>52.1</b>	<b>56.6</b>	<b>11.7</b>	<b>0.4</b>	<b>4.8</b>	<b>0.2</b>		<b>125.8</b>
County Roads	2.2				0.7			2.9
Forest Service Roads	39.2	17.1	0.5	0.4	0.4			57.7
Permitted Roads	10.3	39.5	11.2		3.8	0.2		64.9
State Roads	0.3							0.3
<b>San Bernardino</b>	<b>4.7</b>	<b>4.4</b>	<b>1.2</b>		<b>0.3</b>		<b>0.0</b>	<b>10.7</b>
Forest Service Roads	4.7	3.6	1.2		0.3		0.0	10.0
Permitted Roads		0.7	0.0					0.8
<b>Total</b>	<b>69.9</b>	<b>71.9</b>	<b>15.7</b>	<b>0.4</b>	<b>8.4</b>	<b>0.2</b>	<b>7.2</b>	<b>173.7</b>

As shown in Table 108, more of the non-motorized trail system would be in BCNM or RW LUZs under Alternative 2a. Mountain bike use of these trails in BCNM would not be affected. Two trails on the Cleveland National Forest would be in the RW LUZ, including the Pacific Crest National Scenic Trail (PCT) in the Caliente IRA and the Barker Spur Trail (2E02) in the Barker Valley IRA. Mountain bike use is already prohibited on the PCT but would be precluded along the lightly used Barker Spur Trail. Most of the trails on the Angeles National Forest, including trails in the Fish Canyon IRA, would also be managed under the RW zoning where mountain bike use is not suitable. Alternative 2a would affect mountain biking opportunities in the Fish Canyon and Barker Valley IRAs.

Allocating Salt Creek and Fish Canyon IRAs to RW would limit the connectivity to the County of Los Angeles trail system to foot and equestrian traffic in those areas. Alternative 2a would have the same effect on the general alignments associated with proposed San Diego County Trails as Alternative 2.

Alternative 2a would not have any effect on the LUZ designations for the motorized trail system on the Los Padres National Forest. There are no motorized trails designated in the planning area on the other three forests, so Alternative 2a would have no effect on the motorized trail system.

**Table 108. Miles of Existing Trails by Forest and LUZ for Alternative 2a**

	Alternative 2a - Trail miles by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Hiker	0.3		2.7		0.3		23.1	26.4
<b>Cleveland</b>	0.9	1.5	29.1		1.4		14.3	47.2
Bicycle	0.4		29.1		1.4			30.9
Hiker		1.5						1.5
Pack and Saddle	0.5						14.3	14.9
<b>Los Padres</b>	120.0	11.5	76.3	2.2	1.1	0.2		211.3
Four Wheel Drive	9.8					0.0		9.8
All-terrain Vehicle	50.3	0.3			0.2			50.8
Hiker	0.0		0.3					0.3
Motorcycle	57.1	0.0			0.4	0.0		57.5
Pack and Saddle	2.9	11.2	76.1	2.2	0.5	0.2		93.0
<b>San Bernardino</b>	0.3		19.9				5.2	25.4
Hiker	0.2		3.7					4.0
Pack and Saddle	0.1		16.1				5.2	21.4
<b>Total</b>	121.2	13.0	125.3	2.2	2.5	0.2	19.6	284.0

The change in zoning associated with the existing unauthorized roads would be the same as Alternative 2, with more unauthorized roads in BCNM and RW LUZs. This does not change the status of the routes, but it could influence the priority for restoration work. Other factors also influence the program of work, including funding objectives and other resource conditions. Specific actions are subject to site specific analysis and beyond the scope of this plan amendment.

### Alternative 3 – Recommended Wilderness Emphasis

Alternative 3 maintains the existing LUZ designations along 200 foot wide corridors for most NFS roads shown as open on the MVUM. The exceptions would be along the Cedar Creek road and a portion of the Eagle Peak road. The Cedar Creek road is a NFS road and shown as open on the MVUM (although it is normally gated closed). The Eagle Peak Road below Saddleback is a County road that is gated closed and not shown as open on the MVUM. Both of these roads would be within an RW LUZ under Alternative 3. On the Angeles National Forest, 4.2 miles of Forest Service road 7N13.1 would be in a RW designation.

Public access along the existing road system would not change for the other forests under Alternative 3. Table 109 summarizes the LUZ designations for the existing road system under Alternative 3.

Many of the permitted roads on the Los Padres and Cleveland National Forests would be in RW areas under Alternative 3. Authorized use of these roads would continue subject to the terms of the permit. Several miles of closed Forest Service roads would also be included in RW.

Alternative 3 would not maintain all program emphasis items for future transportation system improvements. The RW designation proposed for the Sawmill Badlands IRA under Alternative 3 would likely preclude construction of the connector trail between Hungry Valley and Ballinger OHV areas. Alternative 3 maintains the opportunity for a parallel OHV trail along the Gold Hill road, and maintains the potential for additions to the California Back Country Discovery Trail along existing system roads. Mountain bike use along the San Diego Trans-County Trail sections that cross through the Eagle Peak recommended wilderness area on the Cleveland National Forest would be precluded by Alternative 3.

**Table 109. Miles of Existing Road by Forest and LUZ for Alternative 3**

	Alternative 3 - Miles of road by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>	<b>3.2</b>	<b>1.3</b>	<b>0.5</b>		<b>1.9</b>		<b>4.5</b>	<b>11.4</b>
County Roads					0.3			0.3
Forest Service Roads	3.2	0.5			0.9		4.5	9.2
Permitted Roads		0.8	0.5		0.7			2.0
<b>Cleveland</b>	<b>6.2</b>	<b>8.1</b>	<b>0.7</b>		<b>1.4</b>		<b>9.3</b>	<b>25.8</b>
County Roads	0.9	1.7	0.5		0.1		1.5	4.7
Forest Service Roads	3.8	4.7	0.0		0.3		3.7	12.5
Permitted Roads	1.5	1.7	0.2		0.9		4.2	8.6
<b>Los Padres</b>	<b>52.0</b>	<b>32.9</b>	<b>2.4</b>	<b>0.4</b>	<b>4.8</b>	<b>0.2</b>	<b>32.9</b>	<b>125.8</b>
County Roads	2.2				0.7			2.9
Forest Service Roads	39.2	17.1		0.4	0.4		0.5	57.7
Permitted Roads	10.3	15.8	2.4		3.8	0.2	32.4	64.9
State Roads	0.3							0.3
<b>San Bernardino</b>	<b>4.4</b>	<b>4.7</b>			<b>0.3</b>		<b>1.3</b>	<b>10.7</b>
Forest Service Roads	4.4	4.0			0.3		1.2	10.0
Permitted Roads		0.7					0.0	0.8
<b>Total</b>	<b>65.9</b>	<b>47.1</b>	<b>3.7</b>	<b>0.4</b>	<b>8.4</b>	<b>0.2</b>	<b>48.1</b>	<b>173.7</b>



As shown in Table 110, over half of the non-motorized trail system would be in the RW LUZ under Alternative 3. Mountain bike use of these trails would not be suitable. In particular this would affect the mountain bike opportunities in the Trabuco, Coldwater and Fish Canyon IRAs.

The effects of Alternative 3 on connections to the Los Angeles County Trails would be the same as Alternative 2a. Alternative 3 would have the same effect on the general alignments associated with proposed San Diego County Trails as Alternative 2 and 2a, except that a potential mountain bike alignment between Cedar Creek and Eagle Peak would be precluded by RW zoning.

Alternative 3 would not have any effect on the LUZ designations for the motorized trail system on the Los Padres. There are no motorized trails designated in the planning area on the other three forests, so Alternative 3 would have no effect on the motorized trail system.

**Table 110. Miles of Existing Trails by Forest and LUZ for Alternative 3**

	Alternative 3 - Trail miles by LUZ							Total
	BC	BCMUR	BCNM	CB	DAI	EW	RW	
<b>Angeles</b>								
Hiker			0.8		0.3		25.3	26.4
<b>Cleveland</b>	0.9	1.5	0.7		1.4		42.7	47.2
Bicycle	0.4		0.7		1.4		28.4	30.9
Hiker		1.5						1.5
Pack and Saddle	0.5						14.3	14.9
<b>Los Padres</b>	119.2	2.2	2.6	2.2	1.1	0.2	83.8	211.3
Four Wheel Drive	9.8					0.0		9.8
All-terrain Vehicle	50.3	0.3			0.2			50.8
Hiker	0.0						0.3	0.3
Motorcycle	57.1	0.0			0.4	0.0		57.5
Pack and Saddle	2.4	1.9	2.6	2.2	0.5	0.2	83.2	93.0
<b>San Bernardino</b>	0.3						25.1	25.4
Hiker	0.2						3.7	4.0
Pack and Saddle	0.1						21.4	21.4
<b>Total</b>	<b>120.4</b>	<b>3.7</b>	<b>3.3</b>	<b>2.2</b>	<b>2.5</b>	<b>0.2</b>	<b>151.6</b>	<b>284.0</b>

More of the unauthorized roads would be in the RW LUZ (Table 111) under Alternative 3. This does not change the status of the routes, but it could influence their priority for restoration work. Other factors also influence the program of work, including funding objectives and other resource conditions. Specific actions are subject to site specific analysis and beyond the scope of this plan amendment.

**Table 111. Miles of Unauthorized Routes by Forest and LUZ for Alternative 3**

	Alternative 3						Total
	BC	BCMUR	BCNM	DAI	EW	RW	
Angeles	0.7			0.4		18.5	19.5
Cleveland	1.6	3.9	4.3	1.1		33.9	44.7
Los Padres	11.1	7.2	5.8	9.9	0.4	46.5	80.9
San Bernardino	1.3	1.0	1.3	1.3	0.0	37.8	42.7
<b>Total</b>	14.7	12.1	11.3	12.6	0.4	136.7	187.8

## Road and Trail Maintenance.

### Alternative 1 – No Action

Volunteers play an important role in road and trail maintenance on the four national forests. Groups and individuals often “adopt” a route they frequently use. With the decreasing trend in funding, the importance of volunteer maintenance increases.

There would be no change in the existing transportation system. Road and trail maintenance funding from all sources is expected to decline over the planning period. The deferred maintenance backlog identified on page 541 in the 2006 FEIS would continue to grow. The opportunities for and importance of volunteer work would increase based on decreased funding trends.

### Alternative 2 – Proposed Action

There would be a minimal change to the transportation system proposed in Alternative 2. No change is proposed to the motorized road and trail system, so maintenance needs and volunteer opportunities would not be affected by LUZ changes. Mountain bike opportunities are also maintained in key areas such as Trabuco, Fish Canyon, and Eagle Peak, so there would be no change in volunteer opportunities for users in those areas. The overall opportunities for and importance of volunteer work would increase based on decreased funding trends. The deferred maintenance backlog identified in the FEIS (Page 541) would continue to grow.

The tools used to maintain trails in RW areas could change subject to minimum tools analysis. Trail maintenance using primitive tools is the preferred approach but mechanized and motorized equipment could be used if supported by a site specific analysis. Trail maintenance costs may also increase in RW areas where primitive tools are used.

### Alternative 2a – Preferred Alternative

There would be a minimal change to the transportation system proposed in Alternative 2a. No change is proposed to the motorized road and trail system, so maintenance needs and volunteer opportunities would not be affected by LUZ changes. Current mountain bike opportunities are also maintained in the Trabuco IRA, but mountain bike use of trails in the Fish Canyon and Salt Creek IRAs would be precluded by the RW allocations for those areas. Volunteer opportunities for users in the Trabuco IRA and other areas outside of the RW allocations would remain the same. The overall opportunities for and importance of volunteer work would increase based on decreased funding trends. The deferred maintenance backlog identified in the FEIS (Page 541) would continue to grow.

The tools used to maintain trails in RW areas could change subject to minimum tools analysis. Trail maintenance using primitive tools is the preferred approach but mechanized and motorized equipment could be used if supported by a site specific analysis. Trail maintenance costs may also increase in RW areas where primitive tools are used. The length of trails maintained would decrease as costs increase.

### **Alternative 3 – Recommended Wilderness Emphasis**

There would be a minimal change to the motorized transportation system proposed in Alternative 3. Two roads in the Eagle Peak area would be in areas designated as RW, so maintenance needs would change and volunteer opportunities would change in that area from motorized (OHV) users to non-motorized users. The change in mountain bike opportunities proposed for Alternative 3 would greatly reduce the opportunities for volunteer work by mountain bike users in key areas such as Trabuco, Fish Canyon, and Eagle Peak. This reduction in volunteer opportunities for mountain bike enthusiasts would shift to more volunteer opportunities for hiker and equestrian oriented users. There would be an increase in volunteer opportunities for users with those interests. The overall opportunities for and importance of volunteer work would increase based on decreased funding trends. The deferred maintenance backlog identified in the FEIS (Page 541) would continue to grow.

The tools used to maintain trails in RW areas could change subject to minimum tools analysis. Trail maintenance using primitive tools is the preferred approach but mechanized and motorized equipment could be used if supported by a site specific analysis. Trail maintenance costs may also increase in RW areas where primitive tools are used. The length of trails maintained would decrease as costs increases.

## **Commodity and Commercial Uses \_\_\_\_\_**

### **Livestock Grazing**

Livestock grazing has potential impacts associated with use such as bedding areas, trails, hoof action, removal of herbaceous and woody vegetation, riparian and wet areas disturbance, soil compaction, threatened and endangered species and conflicts with other multiple uses of the national forest. The degree of impact(s) is analyzed at the site-specific level and appropriate management actions are implemented. Land management plan design criteria and guidance provide for protection of resources and moving towards and/or meeting desired conditions.

Wild horse and burro territories and herds on the Los Padres and San Bernardino National Forests are not affected by any alternative. Only the Los Padres Wild Horse Territory is within an IRA in the planning area (Black Mountain IRA).

Authorized grazing has always been permissible in wilderness where such use predated the establishment of the wilderness and where grazing is compatible with primary uses (Section 4(d)(4)(2) of the 1964 Wilderness Act). Necessary fencing, livestock handling facilities, roads, and watering developments in the wilderness are maintained and constructed to support livestock and prevent resource damage. There are 66 designated grazing areas within, in whole or in part, wilderness areas in the four southern California national forests, occupying approximately 11% of the total NFS existing wilderness areas. Livestock grazing could be affected if grazing is not allowed to remain at historical levels. In addition, wilderness designation over active allotments

can limit term grazing permit holders ability to maintain improvements by increasing the approval process to use tools such as chainsaws and all-terrain vehicles.

The use of roads facilitates a cost-effective and efficient way for the Forest Service and permit holder to access grazing areas, movement of livestock, monitoring the compliance of permit terms and conditions, and the maintenance of rangeland improvements. Most administrative roads located within grazing areas are maintained to Forest Service standards by the permit holder. Closure of these roads would increase the costs of grazing area administration and reduce the capability to monitor and determine whether desired conditions for resource areas are being met. Conflicts can occur on NFS roads that are available to both the public and livestock. Overland travel is permitted and used to maintain range improvements, manage livestock, and allotment management by both the permit holder and Forest Service personnel. The use of overland travel reduces the need for additional authorized roads.

Table 112 lists the IRA total acreage, the total livestock grazing areas and Black Mountain Wildhorse Territory suitable acreage, and percent livestock area in the 37 IRAs by Forest. As illustrated in Table 112, livestock grazing areas and the Black Mountain Wildhorse Territory located, in part, in the IRAs are highest on the Los Padres National Forest with acreages on the San Bernardino, Cleveland and Angeles National Forests respectively lower. The 103 acres on the Angeles National Forest are in the Sespe Frazier IRA administered by the Los Padres National Forest.

Although the number of livestock grazing areas and Black Mountain Wildhorse Territory suitable acres by land use zone varies among the alternatives, it is anticipated that there would not be any significant change to the management of these designated areas. There may be some management challenges that result from user conflicts but this has not been an issue in the past especially as areas move from Back Country to Recommended Wilderness land use zones.

The one potential effect is the amount of motorized use, specifically roads and overland travel, moving from Back Country to Recommended Wilderness land use zones by alternative. However, the critical roads required for management of the livestock grazing areas and the Black Mountain Wildhorse Territory have been buffered and/or allowed to remain either as by exception in the Back Country Non-Motorized land use zone or by Section 4(d)(4)(2) of the 1964 Wilderness Act.

**Table 112. Total IRA Acreage, Livestock Grazing & Black Mountain Wildhorse Territory Area Suitable Acreage, and Percent Livestock Area in IRAs by Forest**

National Forest	Total IRA Acreage	Total Livestock Grazing Area Acreage	Percent Livestock Area in IRA's
Angeles	70,201	103	<1%
Cleveland	83,445	4,165	<1%
Los Padres	419,583	206,282	49%
San Bernardino	49,696	14,410	29%

**Alternative 1 – No Action**

The current land use zones with livestock grazing and the Black Mountain Wildhorse Territory suitable acres for the 37 IRAs under this analysis would remain the same for the four southern California national forests.

Table 113 illustrates the distribution of livestock grazing areas and Black Mountain Wildhorse Territory suitable acreages in IRAs by forest by land use zone.

**Table 113. Alternative 1 = Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones**

ALTERNATIVE 1								
National Forest	BC	BCMUR	BCNM	CB	DAI	EW	RW	GRAND TOTAL
Angeles	0	0	103	0	0	0	0	103
Cleveland	411	1,029	2,493	2	231	0	0	4,166
Los Padres	76,533	114,993	13,754	30	654	319	0	206,282
San Bernardino	128	1,861	4,416	0	0	0	8,005	14,410
TOTALS	77,072	117,883	20,766	32	885	319	8,005	224,961

Note: The 103 acres listed for the Angeles National Forest are from the Piru (55) Allotment Administered by the Los Padres National Forest in the Sespe Frazier IRA.

**Alternative 2 – Proposed Action and Alternative 2a – Preferred Alternative**

Under Alternatives 2 and 2a, the land use zones with livestock grazing and the Black Mountain Wildhorse Territory suitable acres for the 37 IRAs under this analysis proposes a predominant shift from Back Country and Back Country Use Restricted to Back Country Non-Motorized (90%) for the four southern California national forests.

Table 114 illustrates the distribution of livestock grazing areas and Black Mountain Wildhorse Territory suitable acreages in IRAs by forest by land use zone.

**Table 114. Alternative 2/2a =-Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones**

ALTERNATIVE 2/2a								
National Forest	BC	BCMUR	BCNM	CB	DAI	EW	RW	GRAND TOTAL
Angeles	0	0	103	0	0	0	0	103
Cleveland	278	73	22	2	231	0	3,560	4,166
Los Padres	4,907	4,556	195,817	30	654	319	0	206,282
San Bernardino	6	41	6,358	0	0	0	8,005	14,410
TOTALS	5,191	4,670	202,299	32	885	319	11,565	224,961

Note: The 103 acres listed for the Angeles National Forest are from the Piru (55) Allotment Administered by the Los Padres National Forest in the Sespe Frazier IRA.

**Alternative 3 – Recommended Wilderness Emphasis**

The land use zones with livestock grazing and the Black Mountain Wildhorse Territory suitable acres for the 37 IRAs under this analysis proposes a predominant shift from Back Country, Back Country Use Restricted and Back Country Non-Motorized to Recommended Wilderness (87%) for the four southern California national forests.

Table 115 illustrates the distribution of livestock grazing areas and Black Mountain Wildhorse Territory suitable acreages in IRAs by forest by land use zone.

**Table 115. Alternative 3 - Livestock Grazing Areas and Black Mountain Wildhorse Territory Suitable Acres in IRAs by Forest by Land Use Zones**

ALTERNATIVE 3								
National Forest	BC	BCMUR	BCNM	CB	DAI	EW	RW	GRAND TOTAL
Angeles	0	0	0	0	0	0	103	103
Cleveland	276	73	21	0	231	0	3,563	4,166
Los Padres	2,677	736	23,083	30	654	319	178,783	206,282
San Bernardino	6	41	0	0	0	0	14,363	14,410
TOTALS	2,959	850	23,104	30	885	319	196,814	224,961

Note: The 103 acres listed for the Angeles National Forest are from the Piru (55) Allotment Administered by the Los Padres National Forest in the Sespe Frazier IRA.

## Minerals

As stated earlier in the affected environment section, minerals management consists of various activities on the southern California national forests, including locatable minerals (e.g. gold, gemstones), leasable materials (e.g. oil and gas on the Los Padres National Forest), and mineral materials (e.g. sand and gravel). Title 36 CFR Section 228 provides the regulations that the Forest Service follows when allowing for exploration and development of mineral resources in a way that does not significantly affect surface resources.

Title 36 CFR 228.12 speaks specifically to locatable minerals, allowing for access to operations following an approved plan of operations as long as the access protects forest surface resources including scenic values and ensuring against erosion and water or air pollution. Title 36 CFR 228.15 speaks specifically to operations within national forest wilderness in that only parties with valid existing rights at the time of congressional designation can conduct exploration and development. Wilderness character is to be protected. Valid and existing rights also allow for permitted access.

The 1920 Mineral Leasing Act (as amended) and the 1970 Geothermal Steam Act govern leasable minerals, which include oil, gas, phosphates and geothermal resources. The law provides for the leasing of the public mineral estate by a prospector or a corporation, provided that the lands are open for mineral leasing and not reserved or withdrawn for other purposes.

The Bureau of Land Management (BLM) can issue leases that allow for extraction from oil from beneath Recommended Wilderness. On the Los Padres National Forest, this availability is also contingent on the 2006 ROD. Leases issued for commodity extraction from beneath Recommended Wilderness are considered prior existing rights if Congress formally designated the Wilderness. Once Congress designates wilderness, no new leases can be issued (irregardless of whether the land was deemed available in a LMP or leasing analysis) unless it is provided for in the enabling legislation.

## Effects on Commodities

The current condition of each IRA in regards to mineral potential and use is detailed in each of the IRA Analysis in Appendix 2. These evaluations indicate that the IRAs fall into the following categories: (1) no past or current minerals activities, (2) no current activities, but evidence of past

activities, (3) current small scale activities, (4) current large scale activities, and (5) potential future activities. In addition, a number of the IRAs have portions of land that have already been withdrawn from minerals development, mainly for watershed protection on the Los Padres and Angeles National Forests.

Current conditions in Alternative 1 would generally remain in place. Areas within IRAs that have higher mineral potential would continue to be exploited based on the economic feasibility to develop the commodity in question. As the areas in question are all Inventoried Roadless Areas, development may be limited to existing roads.

Alternatives 2, 2a, and 3 generally place further restrictions on commodity development. Congressionally designated wilderness is withdrawn from mineral exploration. Withdrawals do not guarantee that mining will not occur, because National Forest System lands are subject to valid existing rights at the time of a withdrawal. The forest plan revision process does not take away valid existing rights. Wilderness is withdrawn from mineral entry; therefore, no mining, leasing, nor drilling will occur within wilderness boundaries except in those few areas with prior existing rights. An indirect effect of the alternatives adding recommended wilderness LUZs could be an increase in mining claims, since valid existing rights are protected until such time as the areas are designated wilderness by congressional action.

Table 116 lists those IRAs that either have no past or current mineral potential, or evidence of past use but no current use. The various alternatives should have no effect on mineral development in these IRAs.

**Table 116. IRAs by Forest with No Mineral Potential**

Angeles	Cleveland	Los Padres	San Bernardino
Salt Creek Westfork West Fork	Cedar Creek Coldwater Ladd No Name Sill Hill	Black Mountain Diablo Dry Lakes Juncal Machesna Mountain Quatal Tequepis	Cucamonga C

Since minerals development is subject to valid existing rights, even when Land Use Zones change, those IRAs that have current activities will continue to have current activities. The effects on current uses may be associated with access issues, though authorized motorized use can continue “by exception” even in Recommended Wilderness.

The Bureau of Land Management (BLM) considers a claim to have valid and existing rights if the owner can demonstrate that the claim contains a discovery of a valuable mineral deposit and is used and occupied properly under the General Mining Law, as of the date of withdrawal and as of the date of the mineral examination. Mining claims or sites whose discovery or use or occupation cannot be demonstrated on the date of withdrawal or the date of mineral examination have no valid existing rights and will be contested by the BLM.

The Record of Decision for Oil and Gas Leasing, Los Padres National Forest (R5-MB-070, July 2005) decided that there will be no development in inventoried roadless areas. Approximately 485,000 acres, or 93% of the 523,000 total IRA acres in the leasing study area, will not be leased. Another 38,000 acres, the remaining 7% of the IRA acres, if leased, would be leased with the No Surface Occupancy (NSO) stipulation. The South Cuyama High Oil and Gas

Potential Area (HOGPA) encompass portions of the Fox Mountain, Spoor Canyon, Cuyama , and the Sawmill-Badlands IRAs. The San Cayetano HOGPA encompasses portions of the Sespe-Frazier IRA. Inventoried roadless areas in the three HOGPAs where leasing will be allowed are either not leased or will have the NSO stipulation applied. In these areas there will be no surface activity allowed. When leases expire and where adverse impacts cannot be mitigated, those leases will not be renewed.

### Angeles National Forest

The following section discusses potential future uses based on mineral potential.

**Fish Canyon** – Prospects and historical adits near the Gillette Mine attract the occasional explorer. There is an existing road in the area (7N22). There are no active mineral claims, operations, sales, or leases. Oil and gas leases existed as recently as 1995. Approximately half the area is withdrawn from mineral entry under 1872 Mining Law.

Alternatives 2 and 2a - – 96% of the IRA would have an LUZ of RW. With no active mineral claims, the likelihood of mineral exploration is low. Given the nearby mining, it is possible that more minerals claims would be made to protect future valid existing rights claims prior to possible congressional designation.

Alternative 3 - 97% of the IRA would have an LUZ of RW. The effects would be the same as Alternatives 2 and 2a.

**Red Mountain** - Approximately 40% of the area is withdrawn from mineral entry under 1872 Mining Law. There are no active mineral claims, operations, sales, or leases. In recent years, recreational mining has become more popular in wilderness with high value metals such as gold.

Alternatives 2 and 2a – Only about 200 acres of current DAI and BC would be changed to BCNM. As the majority of the area is currently BCNM, there should be no discernible changes to minerals management than the current situation.

Alternative 3 - The area would change from 0% RW to 98.5% RW. Given the current market for high value metals, it is likely that additional mining claims would be made in this area to establish valid existing rights.

**Tule** - Approximately 40% of the area has been withdrawn from mineral entry under the 1872 Mining Law. There are no active mineral claims, mining operations or plans, or sales. Most of the area has a high potential for oil and gas occurrence and has historically been leased. There is one current application for lease in Township 6 North, Range 16 West, Section 14. In recent years, recreational mining has become more popular in wilderness with high value metals such as gold.

Alternatives 2 and 2a – Only about 400 acres of current DAI and BC would be changed to BCNM. As the majority of the area is currently BCNM, there should be no discernible changes to minerals management than in the current situation.

Alternative 3 - The area would change from 0% RW to 98% RW. Given the current market for high value metals, it is likely that additional mining claims would be made in this area to establish valid existing rights.

**Sespe-Frazier** - Most of the area has a high potential for oil and gas occurrence. Most of the area has been leased in the past. The area contains a high concentration of active mining claims.



There could be as many as 15; the exact number and location are not known as the available data shows claims on only a quarter section basis. No plans or notices for mineral exploration/extraction associated with these claims or saleable mineral areas are currently approved.

Alternatives 2 and 2a - Only about 200 acres of current DAI and BC would be changed to BCNM along with the addition of about 33 acres of RW. As the majority of the area is currently BCNM, there should be no discernible changes to minerals management than in the current situation.

Alternative 3 - The area would change from 0.8% RW to 87% RW. Given the current market for high value metals, it is likely that additional mining claims would be made in this area to establish valid existing rights. The mineral potential and high number of mining claims have the potential to impact the environment. Because possible wilderness designation would not affect existing claims the potential for impacts would persist.

### Cleveland National Forest

The following section discusses potential future uses based on mineral potential.

**Barker Valley** - South of Palomar Divide Road (Section 10, T10S, R2E) is the Maple Lode Mine, which is currently listed with the BLM as an active mining claim. It includes approximately 0.5 miles of road for motorized access and fence improvements which are maintained by the claimholders.

Alternatives 2 and 2a – The Maple Lode mine LUZ is not changed from current conditions. About 92% of the IRA would have an LUZ of RW. With no active mineral claims other than the Maple Lode, the likelihood of additional mineral exploration is low. Given the nearby mining, it is possible that more minerals claims would be made to protect future valid existing rights claims prior to possible congressional designation.

Alternative 3 - This is no different than Alternatives 2 and 2a, so effects would be the same.

**Caliente** - There is an active, moderate size tourmaline mining operation (Cindy B/Cryogenie Mine) in the southern part of the unit (Section 11, T10S, R3E, SBB&M). The Cindy B/Cryogenie Mine produces noteworthy, gem quality tourmaline with high geologic value. Section 2, T10S, R3E, Warner Springs Quadrangle, contains the Donna Lode prospecting claim and Section 14 contains Lost Peg prospecting claim.

Alternatives 2 and 2a – 95% of the IRA would have an LUZ of RW. In the area of these mining claims and operations, most of the LUZs are changed to RW. Given the nearby mining, it is possible that more minerals claims would be made to protect future valid existing rights claims prior to possible congressional designation.

Alternative 3 - This is no different than Alternatives 2 and 2a, so effects would be the same.

**Eagle Peak** - There is an active mining claim in the SW1/4 Section 4, (Claim no. CAMC235568, Home Stake, lode claim).

Alternatives 2 and 2a – All of the BC and most of the BCMUR and BCNM are changed to RW, making 96% of the IRA having an LUZ of RW. In the area of this mining claim all of the LUZ is changed to RW. Given the nearby mining, it is conceivable that more minerals claims would be made to protect future valid existing rights claims prior to possible congressional designation.

Alternative 3 - This is no different than Alternatives 2 and 2a, so effects would be the same.

**Trabuco** – Trabuco Canyon has historically been important for mining activity. There is a tin mine in the upper reaches of Trabuco Creek. In the past there have been numerous other mining claims along Trabuco Creek. At present there are inactive mineral claims and closed mines in the unit. A dredging operation in Trabuco Canyon is currently on hold.

Alternatives 2 and 2a – About 500 acres BC, about 400 acres DAI, and most of the BCMUR will be changed to BCNM. As the majority of the area is currently BCNM, there should be no discernible changes to minerals management than the current situation.

Alternative 3 - The area changes from 96% BCNM to 95% RW. Given the current market for high value metals, it is likely that additional mining claims would be made in this area to establish valid existing rights.

**Upper San Diego River** - There is an active mining claim. The NW1/4 of Section 34 (T12S, R3E, SBB&M) contains one active placer mining claim currently operated by the Gold Prospectors of America.

Alternatives 2 and 2a – The BCNM is generally changed to BCMUR and RW, making 85.6% of the IRA having an LUZ of RW. In the area of this mining claim most of the LUZ is changed to RW. Given the nearby mining, it is possible that more minerals claims would be made to protect future valid existing rights claims prior to possible congressional designation.

Alternative 3 - RW is increased to 86.0%. This is such a small difference compared to Alternatives 2 and 2a that the effects would be the same.

#### Los Padres National Forest

The following section discusses potential future uses based on mineral potential.

**Antimony** – There are uranium, antimony, gold, and silver mines in the area that are no longer in operation. Evidence of mining operations and associated access roads can still be seen on the landscape but are not current uses. A high potential for saleable products such as gravel and building stone exists and there is also a high potential for non-strategic and strategic minerals. There is low potential for phosphate production and geothermal resources. There is moderate to low potential for oil and gas leasing in the area.

Alternatives 2 and 2a – About 36,000 acres of BCMUR are changed to BCNM with about 750 acres of DAI remaining unchanged. Reduced access and removal of older, unused roads should limit new mining claims. However, past minerals claims can be re-opened.

Alternative 3 - Half the BC, most of the remaining BCMUR, and all the BCNM are changed to RW resulting in 95% RW. Given the nearby and past mining, it is possible that more minerals claims would be filed to protect future valid existing rights claims prior to possible congressional designation.

**Cuyama** – There are no active mining operations in the area and no evidence of past mining activities. The Cuyama roadless area is within a Forest-designated High Oil and Gas Potential Area. While all roadless areas are excluded from surface occupancy for oil development there could be oil development in adjacent areas. Currently there are approximately 2,326 acres under application for oil and gas leasing. No surface occupancy would be allowed for any future lease granted within the unit.

Alternatives 2 and 2a – The majority of BC and BCMUR are converted to BCNM, resulting in 99.5% BCNM. With no past mining activities, it is unlikely that future mining claims would be made in this area. The current applications may need to be adjusted given changing access due to the new LUZ.

Alternative 3 - About half the remaining BC and BCMUR and all the BCNM are changed to RW, resulting in 99.7% RW. The current applications may need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights.

**Fox Mountain** – There is evidence of historic oil and gas exploration and development; however, there are no current active mines or oil and gas developments within the unit. There are approximately 51 miles of undesignated roads in the unit associated with historic oil and gas exploration and development. Fox Mountain is within a High Oil and Gas Potential Area with the possibility of immediately adjacent oil development. The area is available for oil and gas leasing and has high potential; however, the area between Montgomery and Salisbury Potrereros is withdrawn from surface occupancy.

Alternatives 2 and 2a – About half the BC and 95% of the BCMUR are converted to BCNM, resulting in 92.7% BCNM. With no past mining activities, it is unlikely that future mining claims would be made in this area. Future lease applications may need to be adjusted given changing access due to the new LUZ.

Alternative 3 - The majority of the remaining BC and BCMUR, and all the BCNM are changed to RW, resulting in 99% RW. Future lease applications may need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights.

**Garcia Mountain** – The area is classified as having moderate oil and gas potential. The entire area is considered low potential for phosphate, geothermal energy and locatable or saleable minerals.

Alternatives 2 and 2a – About 75% the BC and 90% of the BCMUR are converted to BCNM, resulting in 89% BCNM. With no past mining activities, it is unlikely that future mining claims would be made in this area. Future lease applications may need to be adjusted given changing access due to the new LUZ.

Alternative 3 - The majority of the remaining BC and BCMUR, and all the BCNM are changed to RW, resulting in 95% RW. Future lease applications may need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights.

**Madulce Buckhorn** – There is an oil and gas pipeline and associated temporary maintenance road running through the eastern portion of the IRA in Section 34. The area is available for oil and gas leasing within the Mt. Pinos Ranger District portion of Madulce Buckhorn. Part of the area is identified as having high potential. Any future oil and gas leasing would occur with “no surface occupancy” restrictions. The area is within a watershed withdrawal that precludes mineral entry within the Santa Barbara Ranger District portion. There is no evidence of historic mining activities in the unit.

Alternatives 2 and 2a – About half the BC and 80% of the BCMUR are converted to BCNM, increasing the BCNM area from 36.5% to 54.3%. RW already accounts for 37.4%. About 75 acres of DAI remain in all alternatives. With no past mining activities, it is unlikely that future mining claims will be made in this area. Future lease applications may need to be adjusted given changing access due to the new LUZ. There would be no change to the LUZs associated with the gas pipeline.

Alternative 3 - The majority of the remaining BC and BCMUR and all the BCNM are changed to RW, resulting in 94.7% RW. Future lease applications may need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights. There will be no change to the LUZs associated with the gas pipeline.

**Sawmill Badlands** – There is evidence of historic mining activities; however, there is no active mining activity. Gypsum is mined in the area. There is a moderate potential for saleable products such as gravel and building stone. And there is a moderate potential for strategic and non-strategic minerals, and there is low potential for phosphates and geothermal resources. There is high potential for oil and gas development in the western portions of the area.

Alternatives 2 and 2a – About 2,000 acres of DAI remains in this alternative. About 95% of BC is converted to BCNM, resulting in 87.4% BCNM. About 300 acres are already wilderness. RW already accounts for 37.4%. About 75 acres of DAI remain in all alternatives. Since there has been historic mining in the area, it is possible that mining claims will be established to establish valid existing rights. Future lease applications may need to be adjusted given changing access due to the new LUZ.

Alternative 3 - About 2,000 acres of DAI remains in this alternative. About half of the remaining BC, and all the BCNM are changed to RW, resulting in 89.8% RW. Future lease applications may need to be adjusted further given changing access due to the new LUZ. Since there has been historic mining in the area, it is possible that mining claims would be established to establish valid existing rights.

**Sespe Frazier** – The Sespe-Frazier IRA surrounds the existing wilderness and is composed of nine separate areas. The IRA Analysis details the commodities associated with each area. There is a history of mineral extraction and many current operations. One area currently has four applications for approximately 2,396 acres of oil and gas leasing. Any oil and gas leasing for exploration and development will be subject to no surface occupancy within the unit.

Alternatives 2 and 2a – About 95% of the BC and 85% of the BCMUR are converted to BCNM, increasing the BCNM area from 30.4% to 93.6%. About 2400 acres of DAI remain in all alternatives. Since there has been historic mining in the area, it is possible that mining claims would be established to establish valid existing rights. Future lease applications may need to be adjusted given changing access due to the new LUZ.

Alternative 3 - Most of the remaining BC and BCMUR, and 40% the BCNM are changed to RW, resulting in 56.1% BCNM and 38.8% RW. Future lease applications may need to be adjusted further given changing access due to the new LUZ. Since there has been historic mining in the area, it is possible that mining claims would be established to establish valid existing rights.

**Spoor Canyon** – There is no current mining or oil and gas development within the unit and no evidence of past activities. The unit is within a designated high oil and gas potential area. No surface occupancy would be allowed on any future lease issued for oil and gas exploration and development.

Alternatives 2 and 2a – About 1,500 acres of BC and BCMUR are converted to BCNM, increasing BCNM from 74.8% to 85.2%. With no past mining activities, it is unlikely that future mining claims would be made in this area. Future lease applications would need to be adjusted given changing access due to the new LUZ.

Alternative 3 - All but 10 acres of BC and all of BCMUR and BCNM are changed to RW, resulting in 99.9% RW. Future lease application would need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights.

**White Ledge** – There is no evidence of historic mining activities. The southern portion of this area has been rated as having a high potential for oil and gas occurrence.

Alternatives 2 and 2a – About 90% of BCMUR and 65% of DAI are converted to BCNM, increasing BCNM from 85% to 97.6%. With no past mining activities, it is unlikely that future mining claims will be made in this area. Future lease applications would need to be adjusted given changing access due to the new LUZ.

Alternative 3 - All but 130 acres of a mix of BC, BCMUR, BCNM, CB, and DAI are changed to RW, resulting in 99.3% RW. Future lease application would need to be adjusted further given changing access due to the new LUZ. Given past practices, it is unlikely that additional mining claims would be made to establish prior existing rights.

#### San Bernardino National Forest

The following section discusses potential future uses based on mineral potential.

**Cactus Springs B** – New mineral and geothermal rights have been withdrawn under National Monument authority. Any claims are subject to valid existing rights. This unit has many gold, tourmaline and other prospects in the form of pits, abandoned shafts and adits. The mineral resource potential for any major discovery is low. Remediation of all unsafe mine workings may be substantial and costly. Unauthorized prospectors frequent the area after winter rains and major fires to look for pegmatite veins which may expose pockets of quality gem stones. The area surrounding this unit has produced world-class gem stones.

Alternatives 2 and 2a – The majority of BC is changed to BCNM. This may limit access to future prospectors. With an approved plan of operation and environmental analysis, roads may be developed that protect surface resources.

Alternative 3 - The area changes from 98.8% BCNM to 98.8% RW. The economic feasibility of claim development may be decreased because roaded access would be limited to protect the wilderness character and scenic character. Claims with valid existing rights could be the only projects developed, if an approved plan of operations is obtained.

**Cucamonga B** – Approximately two acres have been withdrawn from mineral entry. There are no known prospects or potential for significant mineral deposits. Limestone pendants in the surrounding areas have moderate potential for future development. No known significant metallic mineral deposits have been identified in this area. However, numerous mine sites have

been identified (see IRA Analysis in Appendix 2) for gold, silver, lead, copper, tungsten, and zinc.

Alternatives 2 and 2a – The majority of BC is changed to BCNM, with the existing condition including about 50% RW. Over 600 acres remains as DAI. This may limit access to future prospectors. With an approved plan of operation and environmental analysis, roads may be developed that protect surface resources.

Alternative 3 - The area changes from 41% BCNM to 94% RW. Over 600 acres remains as DAI. The economic feasibility of claim development may be decreased because roaded access would be limited to protect the wilderness character and scenic character. Claims with valid existing rights could be the only projects developed, if an approved plan of operations is obtained.

**Pyramid Peak A** – There are old mines and access roads in the southern portion of the area. New mineral and geothermal rights have been withdrawn under National Monument authority. An asbestos mines (Donna C) is currently being remediated for public health and safety. Hill Top and Satterfield are active placer mining claims. There are a number of inactive and abandoned mine sites (see IRA Analysis in Appendix 2).

Alternatives 2 and 2a - All of the BC and BCMUR is changed to BCNM, with the existing condition including about 50% RW. This may limit access to future prospectors. With an approved plan of operation and environmental analysis, roads may be developed that protect surface resources.

Alternative 3 - The area changes from 48% BCNM to 100% RW. The economic feasibility of claim development may be decreased because roaded access would be limited to protect the wilderness character and scenic character. Claims with valid existing rights could be the only projects developed, if an approved plan of operations is obtained.

**Raywood Flat B** – The mineral potential of this area is low to unknown. Approximately eight acres have been withdrawn from mineral entry (in the San Gorgonio Wilderness). Commodities associated with current claims include sandstone, uranium, and tungsten.

Alternatives 2 and 2a – Only about 500 acres of DAI is changed to BCNM. BC and BCMUR remain approximately the same. The existing condition includes about 34% RW. Access from the Forest Falls community would continue at present levels.

Alternative 3 - BC, BCMUR, and DAI will remain the same as Alternatives 2 and 2a. Most of the BCNM changes to RW, resulting in 93% RW. This may limit access to future prospectors. The economic feasibility of claim development may be decreased because roaded access will be limited to protect the wilderness character and scenic character. Claims with valid existing rights could be the only projects developed, if an approved plan of operations is obtained.

## **Non-Recreation Special Uses**

The key factor that affects the management of non-recreation special uses and the designation of sites and corridors is the suitability of land use zones (LUZ) in consideration of these uses. The following descriptions and comparisons of impacts on non-recreation special uses are based on Table 2.1.3 of the LMP, found in Part 2, pp. 6-7.

The LMP gives the following guidance for applying LUZ to existing non-recreation special uses: “The suitable uses identified are intended as guidance for consideration of future activities and do not affect existing authorized occupancy and uses or the administrative procedures that manage them (LMP Part 2, p. 3).” Although this statement acknowledges that uses existing at the time the new plan was adopted are not subject to the suitable uses tables, future changes to the authorizations such as transfers, reissuance, or modification of uses or facilities may be affected by the LUZ, therefore existing authorizations are considered in this analysis.

The FEIS assumed that existing utility and transportation corridors and communications sites, which were designated for future use in the LMP, would be expected to accommodate demand for the areas they serve through the LMP time period. This assumption is still valid and is based mainly on the continued population growth of the southern California region.

### **Alternative 1 - No Action**

Alternative 1 does not change the LUZs currently established in the LMP and would therefore have no effects on existing Non-Recreation Special Uses or on future potential of NFS lands to support those uses. Lands already placed in a LUZ considered suitable for non-recreation special uses (Developed Area Interface, Backcountry, and Backcountry Motorized Use Restricted) would remain suitable for those uses. Within areas being considered in this analysis, approximately 359,515 acres, or 57.7 percent of the total acreage, would be assigned LUZs that are suitable for non-recreation special uses under Alternative 1.

All existing special use authorizations would continue to be subject to their terms and conditions, laws and regulations, agency policy, and LMP standards. No changes would occur to existing designations of communication sites, and major utility and transportation corridors. These existing LUZ and designated sites would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

### **Alternative 2 – Proposed Action**

#### Angeles National Forest

Under Alternative 2, the acreage within the planning area suitable for non-recreation special uses on the Angeles National Forest (ANF) would decrease from 7,265 acres to 1,960 acres. Alternative 2 would reduce the percentage of the ANF planning area suitable for non-recreation special uses from 10.3 percent to 2.8 percent.

Existing authorizations and the two major utility corridors that are along the boundaries of IRAs have been excluded from changes to the LUZ, and the utility corridors have been buffered by 300 feet to allow for operation and maintenance of existing utilities, and for potential expansion. Alternative 2 does not change the LUZ for existing authorizations, including the LADWP Aqueduct in the Tule IRA and the Cogswell Sediment Site in the Westfork IRA. Existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

#### Cleveland National Forest

Under Alternative 2, the acreage within the planning area suitable for non-recreation special uses on the Cleveland National Forest (CNF) would decrease from 14,751 acres to 6,512 acres. Alternative 2 would reduce the percentage of the CNF planning area suitable for non-recreation special uses from 17.6 percent to 7.8 percent.

The Valley-Serrano Utility Corridor and the existing transmission line within the corridor would not be changed from the existing LUZ, and the corridor would remain suitable for future expansion of facilities. The military training area in Barker Valley IRA (under an existing special use authorization) would be partially changed to Recommended Wilderness, a zone that is suitable for non-recreation special uses only by exception. This change would not affect operations under the current authorization, as the activities authorized are non-motorized in nature, and issuance of a new authorization in the future would not necessarily be precluded as the RW zone allows for non-recreation special uses by exception. No changes to LUZ would occur for other existing non-recreation special use authorizations, and no impacts to existing authorizations (other than the military training area) within the CNF planning area would occur under Alternative 2. All would continue to be managed according to their existing authorizations, current LUZ, and applicable regulations and policies. Expansion of those uses could be limited by restrictions in adjacent areas. Existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

#### Los Padres National Forest

Under Alternative 2, the acreage within the planning area suitable for non-recreation special uses on the Los Padres National Forest (LPNF) would decrease from 326,365 acres to 32,178 acres. Alternative 2 would reduce the percentage of the LPNF planning area suitable for non-recreation special uses from 78 percent to 7.6 percent. While Alternative 2 would substantially reduce the acreage of the LPNF planning area suitable for non-recreation special uses, no increase in RW would occur within the LPNF planning area under Alternative 2. Instead, the reduction in acres suitable for non-recreation special uses results from a substantial increase in acres of BCNM, from 86,521 to 379,803.

The BCNM zone allows for non-recreation special uses and communication sites by exception. It would reduce future opportunities for utility and transportation corridors, which are not suitable in the BCNM zone. Existing LUZ and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

No changes to LUZs would occur for existing non-recreation special use authorizations and no impacts to existing authorizations within the LPNF planning area would occur under Alternative 2. All would continue to be managed according to their existing authorizations and applicable regulations and policies.

#### San Bernardino National Forest

Under Alternative 2, the acreage within the planning area suitable for non-recreation special uses on the San Bernardino National Forest (SBNF) would decrease from 11,135 acres to 1,670 acres. Alternative 2 would reduce the percentage of the SBNF planning area suitable for non-recreation special uses from 22.4% to 3.3%. No increase in RW would occur within the SBNF planning area under Alternative 2. Instead, the reduction in acres suitable for non-recreation special uses results from an increase in acres of BCNM, from 20,332 to 29,692.

The BCNM zone allows for non-recreation special uses and communication sites by exception. It would only minimally reduce future opportunities for utility and transportation corridors, which are not suitable in the BCNM zone. Existing LUZ and designated sites outside of the



planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

No changes to LUZs would occur for existing non-recreation special use authorizations and no impacts to existing authorizations within the SBNF planning area would occur under Alternative 2. All would continue to be managed according to their existing authorizations, current LUZs, and applicable regulations and policies.

### Planning area Summary

Under Alternative 2, the acreage suitable for non-recreation special uses within the entire planning area would decrease from 359,515 acres to 42,320 acres. Alternative 2 would reduce the percentage of the planning area suitable for non-recreation special uses from 57.7% to 6.7%.

While this is a substantial decrease in suitable acreage across the planning area, these numbers do not represent a substantial impact on the ability of the national forests to accommodate future demand for non-recreation special uses when looked at from the context of the southern California national forests as a whole. The planning area encompasses 628,786 acres of National Forest System lands or approximately 17.6% of all National Forest System lands across the four southern California national forests. As noted for each individual national forest, a substantial majority of suitable LUZs, designated utility and transportation corridors, and communication sites are located outside of the planning area, are not affected by this project, and are assumed to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

Existing non-recreation special use authorizations would not be affected by Alternative 2 with minor exceptions noted above by national forest, due to LUZ boundary changes excluding authorized facilities. Across the planning area, they would continue to be managed according to their existing authorizations, current LUZ, and applicable regulations and policies.

### **Alternative 2a - Preferred Alternative**

Alternative 2a would have the same effect on non-recreation special uses except for two areas. On the Cleveland National Forest, the San Diego Gas & Electric 69 kV transmission line crossing the Cedar Creek undeveloped area would be changed to RW under Alternative 2a. The status of the existing line would not change, but continuation or expansion of this use would not be suitable within the RW allocation.

On the San Bernardino National Forest, the area adjacent to Raywood Flat B IRA that includes the San Gorgonio Hydroelectric Project would be allocated to RW under Alternative 2a. The license is proposed for surrender and no application for a subsequent use is being considered at this time.

### **Alternative 3 – Recommended Wilderness Emphasis**

#### Angeles National Forest

Under Alternative 3, the acreage within the planning area suitable for non-recreation special uses on the ANF would decrease from 7,265 acres to 1,438 acres. Alternative 3 would reduce the percentage of the ANF planning area suitable for non-recreation special uses from 10.3% to 2%.

Existing authorizations and the two major utility corridors that are along the boundaries of IRAs have been excluded from changes to the LUZ and the utility corridors have been buffered by 300

feet to allow for operation and maintenance of existing utilities, and for potential expansion. Alternative 3 does not change LUZs for existing authorizations, including the LADWP Aqueduct in the Tule IRA and the Cogswell Sediment Site in the Westfork IRA. Existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

#### Cleveland National Forest

Under Alternative 3, the acreage within the planning area suitable for non-recreation special uses on the CNF would decrease from 14,751 acres to 5,417 acres. Alternative 3 would reduce the percentage of the CNF planning area suitable for non-recreation special uses from 17.6% to 6.5%.

The Valley-Serrano Utility Corridor and the existing transmission line within the corridor would not be changed from existing LUZs, and the corridor would remain suitable for future expansion of facilities. The military training area in Barker Valley IRA (under an existing special use authorization) would be changed to Recommended Wilderness, a zone that is suitable for non-recreation special uses only by exception. This change would not affect operations under the current authorization as the activities authorized are non-motorized in nature, and issuance of a new authorization in the future would not necessarily be precluded as the RW zone does allow for non-recreation special uses by exception. The San Diego Gas & Electric 69 kV transmission line crossing the Cedar Creek undeveloped area would be changed to RW under Alternative 3. The status of the existing line would not change, but continuation or expansion of this use would not be suitable within the RW allocation.

No changes to LUZ would occur for other existing non-recreation special use authorizations would occur under Alternative 3. All would continue to be managed according to their existing authorizations, current LUZs, and applicable regulations and policies. Existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

#### Los Padres National Forest

Under Alternative 3, the acreage within the planning area suitable for non-recreation special uses on the LPNF would decrease from 326,365 acres to 15,817 acres. Alternative 3 would reduce the percentage of the LPNF planning area suitable for non-recreation special uses from 78% to 3.7%. Alternative 3 would reduce future opportunities for utility and transportation corridors and communications sites, which are not suitable in the RW LUZ. This reduction in acres occurs to the greatest extent under Alternative 3 on the LPNF; however, existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

No changes to LUZ would occur for existing non-recreation special use authorizations and no impacts to existing authorizations within the LPNF planning area would occur under Alternative 3. All would continue to be managed according to their existing authorizations, current LUZs, and applicable regulations and policies.

#### San Bernardino National Forest

Under Alternative 3, the acreage suitable for non-recreation special uses on the SBNF, within the planning area, would be the same as under Alternative 2.

Existing LUZs and designated sites outside of the planning area would continue to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

No changes to LUZs would occur for existing non-recreation special use authorizations and no impacts to existing authorizations within the SBNF planning area would occur under Alternative 3. All would continue to be managed according to their existing authorizations and applicable regulations and policies.

Planning Area Summary

Under Alternative 3, the acreage suitable for non-recreation special uses within the entire planning area would decrease from 359,515 acres to 24,342 acres. Alternative 3 would reduce the percentage of the planning area suitable for non-recreation special uses from 57.7% to 3.9 %.

Similar to Alternative 2, these numbers do not represent a substantial impact on the ability of the national forests to accommodate future demand for non-recreation special uses when looked at from the context of the southern California national forests as a whole. As noted for each individual national forest and in the summary of impacts for Alternative 2, a substantial majority of suitable LUZs, designated utility and transportation corridors, and communication sites are located outside of the planning area, are not affected by this project, and are assumed to meet present and future demand for utilities, transportation, communications, and other non-recreation special uses.

Existing non-recreation special use authorizations will not be affected by Alternative 3, with minor exceptions noted above by national forest, due to LUZ boundary changes excluding most of the authorized facilities. They will continue to be managed across the planning area according to their existing authorizations and applicable regulations and policies.

**Alternative Comparison**

Table 117 provides a comparison of acres suitable for non-recreation special uses by forest and alternative. Even though the alternatives differ in the number of acres suitable for non-recreation special uses, they do not differ substantially in their ability to meet present and future demands for non-recreation special uses, nor in impacts on existing authorizations. This is due to the exclusion of existing facilities from LUZ changes and the presence of a number of suitable LUZs and designated corridors and sites outside of the planning area.

**Table 117. Forest Acres Suitable for Non-Recreation Special Uses**

Forest	Alt. 1 (acres)	Alts. 2/2a (acres)	Alt. 3 (acres)
Angeles	7,265	1,960	1,438
Cleveland	14,751	6,512	5,417
Los Padres	326,365	32,178	15,817
San Bernardino	11,135	1,670	1,670
<b>TOTAL</b>	359,515	42,320	24,342

## **Lands and Real Estate Management Activities**

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### **Private Lands**

The LMP amendment would not affect management of private lands within or adjacent to the IRAs because the LMP applies only to NFS lands. Management of private land is governed by county general plans as described in Chapter 3. The consistency of the alternatives with the county general plans is discussed in more detail later in Chapter 4.

Access to private lands is established by statute. Section 1323(a) of the Alaska National Interest Lands Conservation Act (ANILCA, PL 96-487) authorizes the Secretary of Agriculture to provide, subject to reasonable rules and regulations, such access to non-federal lands within the boundaries of the National Forest System as deemed adequate to secure the owner the reasonable use and enjoyment of his land. The exercise of a right of reasonable access does not include the right to construct facilities, clear, or perform ground disturbing activities, without an authorization issued under an appropriate authority. Use of existing government roads or facilities also requires an appropriate authorization.

The access to which the landowner is entitled need not be on the most direct, economical, or convenient route for the landowner.

Adequate access may not be road access in all cases, and alternative modes of access may be considered. The appropriate mode or type of access selected should be one that is reasonable for the planned use of the private land and, insofar as possible, compatible with the forest land and resource management plans for the National Forest System lands.

The Roadless Area Conservation Rule (RACR) also provides an exception to the prohibition on road construction when a road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty.

Section 5 of the Wilderness Act (PL 88-577) directs that non-federal landowners “be given such rights as may be necessary to assure adequate access” to their lands. The Act also provides reasonable access for valid mining claims and other valid occupancies, requiring that the Secretary “shall, by reasonable regulations consistent with the preservation of the area of wilderness, permit ingress and egress to such surrounded areas by means which have been or are being customarily enjoyed with respect to other such areas similarly situated.” Subsequent wilderness statutes (passed for new wilderness areas) have generally followed the Wilderness Act requirements.

The Secretary of Agriculture has adopted implementing regulations for ANILCA and the Wilderness Act at 36 CFR § 251 Subpart D. These regulations, in combination with agency policy and LMP direction, provide the criteria that authorized officers apply when evaluating access to non-federal inholdings.

### **Alternative 1 – No Action**

Access to private lands will be managed primarily under the requirements of ANILCA and the RACR, and insofar as possible, consistent with LMP direction. Reasonable access is determined on a case by case basis.

### **Alternative 2 – Proposed Action and Alternative 2a – Preferred Alternative**

As with No Action, access to private lands will be managed primarily under the requirements of ANILCA and the RACR as implemented through the Forest Service regulations, and insofar as possible, consistent with the LMP direction. Reasonable access is determined on a case by case basis. There are no inholdings that will be surrounded by a RW land use zone.

### **Alternative 3 – Recommended Wilderness Emphasis**

Under Alternative 3, with the exception of the Sespe-Frazier IRA, no private inholdings would be surrounded by RW land use zones. Access to those lands would be managed under the requirements of ANILCA, the RACR, and the Wilderness Act as implemented through the Forest Service regulations. As with Alternatives 1 and 2, reasonable access is determined on a case by case basis. The primary difference between Alternatives 2 and 2a and 3 is that future access to areas surrounded by RW would be guided by the access criteria developed consistent with wilderness preservation.

## **Wildland Fire and Community Protection**

The Final EIS for the Revised LMPs discussed the effects of plan decisions on wildfire and community protection on pages 584 to 588. The analysis ranked the key fire management issues by alternative, including vegetation condition, WUI, suppression effectiveness and firefighter access, and recreation use and transportation corridors. The Final EIS concluded that the selected alternative (4a) successfully addressed those issues to a high degree.

The Final EIS for the revised LMP also addressed the effects of fire and fuels management on other resources, such as vegetation (FEIS page 330), wildlife habitat (FEIS page 377) and invasive species (FEIS page 413). The effects of wildfire vary with burn intensity, with more intense fires causing the greatest impacts to vegetation cover, habitat, and water quality. Fire suppression also has the potential to impact vegetation, habitat, and water quality by removal of vegetation and construction of firelines. Fire suppression impacts are addressed through the use of resource advisors during the emergency and suppression repair work once the fire is controlled. Burned Area Emergency Response efforts address the immediate impacts of the fire with the goal of protecting life, property, water quality, and deteriorated ecosystems from further damage after the fire is out.

For this analysis, the effects of the LUZ alternatives are addressed relative to the three issues identified for this resource area, including fire suppression effectiveness, fuels management, and the impact on local fire cooperators.

### **Fire Suppression Effectiveness in IRAs, including WUI**

Fire suppression in IRAs is challenging due to the remoteness of the areas, rugged terrain, and overall lack of access. Changing land use zones could change access to these areas by restricting road construction or maintenance in the more restrictive land use zones. Road access is the primary indicator used in the SEIS for this issue.

### **Alternative 1 – No Action**

There will be no change in the current land use zones and thus no impact on fire suppression effectiveness under Alternative 1. Access to the IRAs would continue to be limited due to limited road access.

### **Alternative 2– Proposed Action and Alternative 2a - Preferred Alternative**

As shown in Tables 104 and 107 in the Transportation section under Alternatives 2 and 2a, there would be no change in the land use zones for county or open Forest Service roads. Most of the county and Forest Service roads are located within the BC, BCMUR, and DAI land use zones. Continued use of those roads is allowable under those land use zones, subject to the requirements of the Roadless Area Conservation Rule (RACR). About 3 miles of permit roads will be shifting to RW in Alternatives 2a. Use of these roads would continue in this alternative under prior existing rights.

Although there are no restrictions on fire suppression in any of the LUZs, including RW, there is a perception that recommending an area as wilderness (the RW LUZ) or congressional designation of an area as wilderness would limit fire suppression effectiveness. This concern was raised during the revision of the LMP and again during scoping as part of this amendment. As described in the FEIS Appendix M – Response to Comments:

“The notion that wilderness designation makes fire suppression more difficult and restrictive is not based on fact. All roadless areas (including designated wilderness) are difficult to suppress fires within because of our inability to drive there to put the fire out with fire engines. The current protocol to obtain permission to use mechanized equipment to suppress wilderness fires is not a time consuming process or significant barrier to fire suppression efficiency. The encumbrance’s firefighters encounter in fighting wilderness fires are the same logistical challenges they face in any firefighting situation without road access.”

With no change in road access, there would be no change in fire suppression effectiveness. This would include access around local communities in the DAI land use zone where current access would remain unchanged.

As described in the Final EIS (page 518), wilderness characteristics, including solitude, primitive recreation experiences and natural landscapes (untrammled by human activities), may be affected by prescribed fire and wildland fire suppression.

### **Alternative 3 – Recommended Wilderness Emphasis**

The effects of Alternative 3 would be similar to Alternative 2 and 2a as there would be no change to the LUZ allocations for most county and Forest Service roads. As described in the Final EIS (page 518), wilderness characteristics, including solitude, primitive recreation experiences and natural landscapes (untrammled by human activities), may be affected by prescribed fire and wildland fire suppression. The LMP includes a strategy (SD-1) in Part 2 of the forest plan for each national forest to demonstrate that prescribed burning may occur in wilderness, whether to maintain wilderness values or for community defense. During management activities, such as prescribed burning, the minimum tool should be implemented. The use of the minimum tool relates to the concept of choosing the least impact, but effective, management suppression technique for each situation in wilderness or other areas sensitive to

management fire suppression techniques as per the LMP strategy. A typical example would be choosing a small hand-built fireline versus line built with a bulldozer.

The intent of minimum impact suppression tactics (MIST) is very similar to the minimum tool intent, to suppress a wildland fire with the least impact to the land. Strategy SD-1 in the LMP emphasizes MIST in all wilderness wildland fire responses. During a wildland fire response, risks to life and values are ascertained and choices for suppression techniques are made considering the effects on wilderness characteristics.

Alternative 3 would allocate the majority of the planning area to RW, but only the Cedar Creek road on the Cleveland National Forest would be included within an RW allocation. This road is shown as open to all vehicles on the MVUM, and links the Boulder Creek road with the Eagle Peak road in the upper San Diego River Canyon. Access for fire suppression equipment would be reduced if this road was in wilderness. This area is one of the locations within the planning area that has experienced multiple fires.

With the exception of the Cedar Creek road area, there would be no change in fire suppression effectiveness with Alternative 3.

## **Fuels Management**

Fuelbreaks play an important role in fire suppression. The current LMP emphasizes fuel treatments and access as the two keys to successful fire suppression, and as discussed in the affected environment, road access to fuelbreaks is one of several variables related to fuelbreak success.

The type and intensity of fuels management activities changes with land use zones. While fuelbreaks are suitable for DAI, BC, and BCMUR allocations, they are allowed by exception for BCNM and RW allocations. Individual project proposals ultimately determine what level of fuel treatment is applied to an area. Treatments in RW are guided by a minimum tool analysis and other wilderness objectives.

Fuelbreaks would also be allowed under the RACR. However roads could not be constructed in support of fuelbreak work in IRAs regardless of the land use zone allocation. This limitation levels the effects of the alternatives on fuels management.

### **Alternative 1 – No Action**

There would be no change in fuels management associated with this alternative. The majority of fuels management would be focused on areas around communities with the balance of work done as part of the indirect community protection strategy.

### **Alternative 2– Proposed Action and Alternative 2a - Preferred Alternative**

Under Alternatives 2 and 2a, there would be approximately 10 miles of existing fuelbreaks within RW allocations (Table 118), primarily on the Angeles National Forest within the Salt Creek and Fish Canyon IRAs. The fuelbreak within the Salt Creek IRA is accessed from the Old Ridge Road. The fuelbreak on Redrock Mountain (within the Fish Canyon IRA) is accessed from Forest Service road 7N23 and was last maintained in 1989.

Alternatives 2 and 2a maintained DAI, BCMUR, or BCNM LUZs between RW and adjacent communities to allow for community protection areas next to communities but outside of

recommended wilderness. This approach was applied to the eastern end of Fish Canyon, the eastern edge of Caliente, and along the west side of the San Diego River. Fuel treatments within those zones are expected to be more intense and would not be consistent with wilderness objectives. Overall, there will be minimal impact on fuels management associated with Alternatives 2 and 2a.

**Table 118. Miles of Fuelbreak by Forest and LUZ for Alternatives 2 and 2a**

	Alternative 2 - Miles of Fuelbreaks by LUZ						
	BC	BCMUR	BCNM	DAI	EW	RW	Total
Angeles	0.8	0.1	11.0	2.5		8.3	22.7
Cleveland	6.8		0.1	0.0		0.7	7.6
Los Padres	13.8	4.8	12.2	2.5	0.1	0.9	34.3
San Bernardino	0.1	1.0	4.4	0.4			6.0
<b>Total</b>	<b>21.5</b>	<b>5.9</b>	<b>27.6</b>	<b>5.4</b>	<b>0.1</b>	<b>10.0</b>	<b>70.5</b>

**Alternative 3 – Recommended Wilderness Emphasis**

Under Alternative 3, over half of the existing fuelbreaks would be allocated to RW (Table 119), primarily on the Angeles and Los Padres National Forest. On the Angeles National Forest, the additional fuelbreaks include the Ruby Canyon and Red Mountain fuelbreaks in the Red Mountain IRA. Neither fuelbreak has Forest Service system road access but they are accessible by bulldozer.

**Table 119. Miles of Fuelbreak by Forest and LUZ for Alternative 3**

	Alternative 3 - Miles of Fuelbreaks by LUZ						
	BC	BCMUR	BCNM	DAI	EW	RW	Total
Angeles	0.8	0.1	0.4	2.5		18.9	22.7
Cleveland	6.8		0.1	0.0		0.7	7.6
Los Padres	9.8	2.0	6.6	2.5	0.1	13.2	34.3
San Bernardino	0.0	1.1		0.4		4.4	6.0
<b>Total</b>	<b>17.5</b>	<b>3.2</b>	<b>7.0</b>	<b>5.4</b>	<b>0.1</b>	<b>37.3</b>	<b>70.5</b>

The fuelbreaks on the Los Padres National Forest are located in several IRAs, with most concentrated in Spoor Canyon, Fox Mountain, Diablo, Juncal, White Ledge, and the southern end of the Sespe-Frazier IRAs. A few of these fuelbreaks have Forest Service system road access adjacent to the fuelbreak while most are accessible by bulldozer from system roads.

Like Alternatives 2 and 2a, Alternative 3 maintained DAI, BCMUR or BCNM between proposed RW and adjacent communities to allow for community protection areas next to communities but outside of Recommended Wilderness.

With the greater emphasis on RW allocation in Alternative 3, there will be a moderate impact on fuels management within the IRAs. Use of bulldozers for fuels treatments would likely decline in areas allocated to RW, with more reliance on less intense treatments. If bulldozer use declines for fuels treatments, it may increase during fire suppression as bulldozers are used to establish access and create fire breaks. While the overall effectiveness of fuels treatments should not change, the cost of fuels treatments in areas allocated to RW would likely increase. Higher treatment costs would result in fewer acres treated under fixed budgets.



## Impact on Local Fire Cooperators

State and local fire cooperators play a critical role in fire suppression on the national forests. As described in the affected environment section, fire suppression resources respond from multiple agencies, and incidents that cross jurisdictional boundaries operate under unified command. Operations on federal lands are directed by federal agency administrators, even when conducted by cooperators.

The current LMP wilderness strategy (SD-1 Wilderness) recognizes the importance of state and local cooperators. For Recommended Wilderness the LMP strategy is:

When new wilderness is recommended, include legislative wording that identifies "where a wilderness area is adjacent to or is in close proximity to inhabited areas, the Secretary may take appropriate measures to control or prevent wildland fire through federal, state, and/or local agencies and jurisdictions."

Recent wilderness designations have adopted language consistent with that strategy. The Omnibus Public Land Management Act of 2009 (PL 111-11) Section 1803 included the following language:

(e) FIRE MANAGEMENT AND RELATED ACTIVITIES.—

(1) IN GENERAL.—The Secretary may take such measures in a wilderness area or wilderness addition designated by this subtitle as are necessary for the control of fire, insects, and diseases in accordance with section 4(d)(1) of the Wilderness Act (16 U.S.C. 1133(d)(1)) and House Report 98–40 of the 98th Congress.

(2) FUNDING PRIORITIES.—Nothing in this subtitle limits funding for fire and fuels management in the wilderness areas and wilderness additions designated by this subtitle.

(3) REVISION AND DEVELOPMENT OF LOCAL FIRE MANAGEMENT PLANS.—As soon as practicable after the date of enactment of this Act, the Secretary shall amend the local fire management plans that apply to the land designated as a wilderness area or wilderness addition by this subtitle.

(4) ADMINISTRATION.—Consistent with paragraph (1) and other applicable Federal law, to ensure a timely and efficient response to fire emergencies in the wilderness areas and wilderness additions designated by this subtitle, the Secretary shall—

(A) not later than 1 year after the date of enactment of this Act, establish agency approval procedures (including appropriate delegations of authority to the Forest Supervisor, District Manager, or other agency officials) for responding to fire emergencies; and

(B) enter into agreements with appropriate State or local firefighting agencies.

The Forest Service strategy would not change through this amendment process. The land use zone allocations proposed under Alternatives 2, 2a, or 3 would not change the jurisdictions of the individual agencies nor would the alternatives change any of the cooperative agreements currently in effect. Congressional direction regarding fire emergencies continues to support the role of state and local firefighting agencies in federally designated wilderness. There should be no effect on any state or local fire cooperator under any of the alternatives.

## Other Plans

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This section discusses any potential inconsistency with an approved state or local plan with the proposed action or alternatives.

### Federal Plans

Recovery plans for species that are known to occur within IRAs covered under this SEIS are: Santa Ana sucker (2012); Vernal Pool Ecosystems of California and southern Oregon (2006); Quino checkerspot butterfly (2003); Southwestern willow flycatcher (2002); Peninsular bighorn sheep (2000); Six Plants from the Mountains Surrounding the Los Angeles Basin (1999); Arroyo toad (1999); San Bernardino Mountains Carbonate Plants (1997) and the Southern California Steelhead Recovery Plan (NMFS 2012).

All four alternatives would be consistent with the Recovery Plan for all ESA listed species. Species and their habitat are protected by implementation of LMP standards and supported by the LMP goals and strategies. Future development would be more limited in Alternatives 2, 2a, or 3 under the land use zone allocations proposed for those alternatives, which would maintain or improve the overall watershed condition supporting downstream habitat. The overall LMP protections would not change under any alternative.

As recovery projects are proposed on the national forests, each project would be evaluated for its consistency with the LMP, including the land use zone requirements. Recovery actions are allowable under all land use zones, but all actions proposed within recommended wilderness or existing wilderness would need to be consistent with wilderness management objectives. Recommended Wilderness would be consistent with the goals, objectives, and actions described in the recovery plan.

### State Plans

**California Forest and Rangelands Strategy Report** (CALFIRE 2010). Implementation of Alternatives 2, 2a, or 3 would be consistent with the three broad national themes that were incorporated in the strategy report. The lower intensity development allowed with the proposed land use zone allocations would maintain or restore the forests, rangeland, and chaparral ecosystems within the planning area, while maintaining the important services those lands provide.

**California Water Plan Update 2009** (DWR 2009). Implementation of Alternatives 2, 2a, or 3 would reduce the intensity of future development within the IRAs and maintain or improve water quality through implementation of the LMP. The watershed section of this SEIS has a more detailed discussion of the impacts of the alternatives on water quality. Implementation of any of the alternatives would be consistent with the water plan.

**California Wildlife Conservation Challenges, California's Wildlife Action Plan (CDF&G 2007)**. Although the current plan requirements (Alternative 1) are consistent with the strategies and actions outlined in the wildlife plan, implementation of Alternatives 2, 2a, or 3 would enhance wildlife management by restricting future development on large blocks of habitat. This is particularly true for recommended wilderness areas, which would be managed for natural conditions. Refer to the wildlife section for a more detailed analysis of the effects on wildlife

and habitat diversity. Implementation of any of the alternatives would be consistent with the Wildlife Action Plan.

## County Plans

The existing land use zones (Alternative 1) and the land use zones proposed in Alternatives 2, 2a, and 3 are consistent with the zoning and land use elements in the county general plans. The low intensity developments that are suitable with the BCNM and RW allocations are compatible with the open space and agricultural uses contemplated in the general plans. Although the Wilderness Act does not require buffers around designated wilderness (and subsequent wilderness designations have explicitly prohibited restrictive buffers) the proposed land use zone allocations in Alternatives 2 and 2a do not recommend wilderness in areas adjacent to high density residential developments. While Alternative 3 does recommend wilderness in several areas adjacent to higher density developments in Ventura, Kern, Riverside, and Orange Counties, this would not be inconsistent with the general plans.

Multiple Species Habitat Conservation Plans have been written for each county covered in this SEIS. These MSHCPs provide additional direction on the conservation of habitats and monitoring of species of concern within each county. Each forest works in cooperation with their respective counties in the coordination and implementation of these plans. These plans are not affected by the Forest LMPs.

## Short-term Uses and Long-term Productivity \_\_\_\_\_

NEPA requires consideration of “the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity” (40 CFR 1502.16). As declared by the Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

This plan amendment will govern management of the southern California national forests until the next plan revision, which must occur within 15 years. This SEIS discloses the analysis of effects for alternatives, including the no action alternative. It also considers the effects of issues on resources for the remainder of the planning period (eight years for the 2006 LMP).

Short-term uses are those expected to occur for the remainder of the 15 year planning period for the 2006 LMP. These uses include, but are not limited to recreation and prescribed burning. This plan amendment does not directly implement uses; however, the potential effects of land use zone allocations are disclosed in this chapter.

Long-term productivity refers to the capability of the land to provide resource outputs for a period of time beyond the planning period. Minimum management requirements, established by regulation (31 CFR 219.27), provide for maintenance of long-term productivity of the land. Minimum management requirements are included in the 2006 LMP and would be applicable for this plan amendment. These requirements and requirements in this amendment ensure that the long-term productivity of the land is not impaired by short-term uses.

Monitoring and evaluation described in the 2006 plan and amended in this analysis applies to all alternatives. A primary purpose of monitoring is to ensure that long-term production of the land is maintained or improved. If monitoring and evaluation show that plan components such as standards and guidelines are inadequate to protect long-term productivity of the land, then the plan will be adjusted (through amendment or revision) to provide for more protection or fewer impacts.

Although alternatives have been designed to maintain long-term productivity, there are differences among the alternatives in the long-term availability or condition of resources. There may also be a difference in the long-term expenditures necessary to maintain or achieve desired resource conditions. The differences are discussed throughout the various sections in Chapter 4 of this document.

## **Economic Efficiency**

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The overall economic efficiency is not expected to change from the existing condition due to the Land Use Zone or Monitoring alternatives because the overall emphasis and direction in the Forest Plans will not be changed and therefore the budgets would remain the same.

## **Unavoidable Adverse Effects**

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Forest Plan amendments such as this one and Forest Plans in general do not produce unavoidable adverse effects because they do not directly implement any management activities that would result in such effects. This plan amendment does not establish any direction for the implementation of management activities. Actions approved by this amendment would adhere to direction found in the 2006 LMP. Proposed land use zone allocations and monitoring direction changes would not result in known unavoidable adverse effects. However, effects may occur and are described by resource area in this chapter.

## **Irreversible and Irretrievable Commitments of Resources**

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Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line rights-of-way or road.

This plan amendment is programmatic in nature and as such does not make a decision to authorize specific activities. Therefore there are no irreversible and irretrievable commitments of resources. The decision to irreversibly or irretrievably commit resources occurs at: (1) the time the Forest Service makes a project level decision such as approving new trail construction; (2) the time Congress acts on a recommendation to establish a new wilderness, or (3) the time the Regional Forester designates a research natural area.

## **Cumulative Effects**

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This section addresses the cumulative effects of the planning decisions proposed under the alternatives at the forest and regional scales. Cumulative effects (or cumulative impacts) are the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. In the context of the forest plan,

the reasonably foreseeable actions are represented by the potential suitable uses as influenced by the mix of LUZs allocated by alternative. The analysis considers different scales, as described within the individual resource sections. Most focus on the effects within the four southern California forests, but several resource discussions consider the effects within the larger southern California area.

As shown in Tables 120 through 122, changes that could occur within the planning area vary at the forest and regional scales depending on the mix of LUZs. The planning area encompasses an area that ranges from 7% to 24% of the individual national forests, or about 18% of the four forests combined. Potential changes at the forest level for the Los Padres National Forest are more noticeable because the planning area occupies almost 25% of the forest. Potential changes would be least noticeable on the San Bernardino National Forest, where the planning area is less than 10% of the forest. The values in Tables 120 through 122 were updated to reflect wilderness areas designated since the LMPs were approved, and include some adjustments to land ownership due to land exchange, acquisition, or donation.

**Table 120. Percent of Planning Area by Forest.**

Forest	Outside Planning Area	Inside the Planning Area	Total Forest
	Percent	Percent	Percent
<b>Angeles</b>	89%	11%	100%
<b>Cleveland</b>	80%	20%	100%
<b>Los Padres</b>	76%	24%	100%
<b>San Bernardino</b>	93%	7%	100%
<b>Total</b>	82%	18%	100%

**Table 121. Mix of Land Use Zones Aggregated at the Forest Level.<sup>4</sup>**

Land Use Zone	Alternative 1	Alternative 2	Alternative 2a	Alternative 3
Angeles	Percent of Forest	Percent of Forest	Percent of Forest	Percent of Forest
Back Country	24%	24%	24%	24%
Back Country Motorized Use Restricted	8%	7%	7%	7%
Back Country Non-Motorized	33%	27%	27%	23%
Critical Biological	0%	0%	0%	0%
Developed Area Interface	12%	12%	12%	12%
Experimental Forest	2%	2%	2%	2%
Existing Wilderness	18%	18%	18%	18%
Recommended Wilderness	2%	8%	8%	13%
<b>Cleveland</b>				
Back Country	18%	17%	17%	17%
Back Country Motorized Use Restricted	12%	11%	11%	11%
Back Country Non-Motorized	38%	30%	30%	24%
Critical Biological	0%	0%	0%	0%
Developed Area Interface	10%	10%	9%	9%
Existing Wilderness	18%	18%	18%	18%
Recommended Wilderness	2%	12%	13%	20%
<b>Los Padres</b>				
Back Country	18%	10%	10%	10%
Back Country Motorized Use Restricted	18%	9%	9%	9%
Back Country Non-Motorized	9%	26%	26%	8%
Critical Biological	0%	0%	0%	0%
Developed Area Interface	3%	3%	3%	3%
Existing Wilderness	49%	49%	49%	49%
Recommended Wilderness	2%	2%	2%	21%
<b>San Bernardino</b>				
Back Country	24%	23%	23%	23%
Back Country Motorized Use Restricted	6%	5%	5%	5%
Back Country Non-Motorized	34%	35%	35%	31%
Critical Biological	0%	0%	0%	0%
Developed Area Interface	9%	8%	8%	8%
Existing Wilderness	24%	24%	24%	24%
Recommended Wilderness	4%	4%	4%	9%

<sup>4</sup> The percentages were updated to account for wilderness areas added after the LMPs were approved. Zero values for CB occur due to rounding of small values.

**Table 122. Mix of LUZs Aggregated for the Four Southern California Forests.<sup>5</sup>**

Land Use Zone	Combined Forests		
	Alternative 1	Alternatives 2/2a	Alternative 3
Four Southern California Forests	Percent of Forests	Percent of Forests	Percent of Forests
Back Country	21%	16%	16%
Back Country Motorized Use Restricted	13%	8%	8%
Back Country Non-Motorized	22%	29%	17%
Critical Biological	0%	0%	0%
Developed Area Interface	7%	7%	7%
Experimental Forest	0%	0%	0%
Existing Wilderness	35%	35%	35%
Recommended Wilderness	2%	5%	17%

The cumulative effects discussion for individual resources is based on the mix of LUZs at the forest and multi-forest scales. The cumulative effects are also based on the expected trends described in the FEIS. The trends in the FEIS included increased growth in the urban areas, increased use of the forests for recreation, and increasing demands for goods and services from the national forests as urban areas develop.

As shown in Table 121, Alternatives 2 and 2a noticeably increases the proportion of RW on the Cleveland National Forest with a more modest increase on the Angeles National Forest. Under Alternatives 2 and 2a, the changes on the Los Padres and San Bernardino National Forests occur within the BCNM allocations and those shifts are noticeable at the combined forest scale. Alternative 3 increases the forest-wide mix of RW for all forests, with the changes most notable for the Angeles, Cleveland, and Los Padres National Forests.

When compared to the alternatives considered in the 2006 FEIS, Alternatives 2 and 2a propose more acres of BCNM and RW than the FEIS Alternative 4a (Alternative 1 in this SEIS), but less than the other FEIS alternatives that emphasized special area designations (FEIS Alternatives 3 and 6). Alternative 3 proposes a mix of LUZs very similar to the plan revision Alternatives 3 and 6.

## Vegetation

The cumulative effects analysis in the 2006 FEIS (pages 324 to 327) is still relevant and applicable. The FEIS considered the cumulative effects relative to specific vegetation communities and management activities. The general trend reported in the FEIS was a general loss or alteration of vegetation communities as private land is developed. This trend is particularly important as it relates to coastal sage, oak woodlands, and riparian areas. Implementation of any of the four alternatives considered in this SEIS is not expected to change these trends or the conclusions in the FEIS.

<sup>5</sup> Zero values for Critical Biological (and Experimental Forest on the Angeles) occur due to rounding of small values.

## Wildlife

Numerous past, present, and reasonably foreseeable future human and natural actions potentially may cause both negative and positive impacts on federally listed threatened and endangered species and/or critical habitats. Activities such as recreation, land development, mining, grazing, animal collection, timber harvest, road construction/maintenance, habitat restoration, natural disasters etc. all may have the potential to impact wildlife species and their habitats. National Forest System (NFS) lands are also places where numerous illegal activities including hazardous material dumping, trash dumping, and illicit drug cultivations occur within wildlife habitats and habitats for TES species. State and private activities and/or events may also occur on the NFS lands with or without permits or authorizations and may impact wildlife resources. Other uncontrollable factors such as global warming may also have an unforeseen effect on wildlife species and their habitats. Broad changes in the environment such as drought conditions and climate change are probably not affected by land use zoning changes on the four forests.

Cumulative effects consist of alteration of occupied, suitable or potentially suitable habitat for threatened and endangered wildlife species that occur within the legislative boundary of the four forests. Southern California national forests are some of the most highly recreated forests in Region 5 and the nation. National forests have land management plan guidance that provides for protection and restoration of wildlife species and habitats. Land use zoning is one of these land management tools. The implementation of land use zones should help reduce impacts on individuals and habitats. Wildlife habitats managed under more restrictive land use zones will result in more beneficial effects than habitats managed under less restrictive land use zones. Despite this, forest use is expected to increase in the present and near future as the population of southern California continues to increase. The cumulative effect of all of these activities is a reduction in quantity and quality of habitat for federally listed wildlife species over the long term. This effect is permanent as more areas become developed and fewer areas remain undisturbed.

The cumulative effects analysis in the FEIS (pages 394 to 398) is still relevant and applicable. The individual species account prepared for the FEIS also contain relevant and applicable cumulative effects discussions on a species basis.

## Botanical Resources

Numerous past, present, and reasonably foreseeable future human and natural actions potentially may cause both negative and positive impacts on federally-listed threatened and endangered species and/or critical habitats, and R5 sensitive species viability and/or habitats. Activities such as recreation, land development, mining, grazing, timber harvest, road construction/maintenance, habitat restoration, natural disasters, etc. may all have the potential to impact plant species and their habitats.

NFS lands are also places where numerous unauthorized activities occur including hazardous material dumping, trash dumping, and illicit drug cultivation which may have impacts on botanical resources. State and private activities and/or events may also occur on the NFS lands with or without permits or authorizations may also impact botanical resources. Other uncontrollable factors such as climate change may also have an unforeseen effect on plant species and their habitats. Broad changes in the environment such as climate change are probably not affected by land use zoning changes on the four forests. However, management of



IRAs with an increase of land use zones that result in less intensive development and limited motorized access may result in ecologically resilient landscapes that may have a great capacity to survive natural disturbances and large-scale threats to sustainability, especially under changing and uncertain future environmental conditions, such as those driven by climate change and increasing human use.

Cumulative effects consist of alteration of occupied, suitable or potentially suitable habitat for plant species. Southern California national forests are some of the most highly recreated forests in Region 5 and the nation. NFS lands have land management plan guidance that provides for protection and restoration of species and habitats. Land use zoning is one of these land management tools. The continued implementation of the LMPs and management of the land use zones may help reduce impacts on plant species and habitats. Despite this, forest use is expected to increase in the present and near future, as the population of southern California continues to increase. The cumulative effect of all of these activities is a reduction in quantity and quality of habitat for federally listed and R5 sensitive species over the long term. This effect is permanent, as more areas become developed and fewer areas remain undisturbed.

The cumulative effects analysis in the FEIS (pages 400 to 402) is still relevant and applicable. The individual species accounts available in the project record contain relevant and applicable cumulative effects discussions consistent with the summary of effects presented in this analysis.

### **Invasive Non-native Species**

The present distribution and abundance of invasive non-native species are directly related to several factors: 1) historical land uses (grazing, mining, timber harvest and burning); 2) adjacent land uses; 3) the presence of new invasive species vectors (post-European-settlement humans and associated livestock, vehicles, firewood etc.); and, 4) increased habitat vulnerability resulting from changed disturbance regimes.

The national forests of southern California are surrounded by one of the most intensively developed urban areas in the country, and these developed areas with their large human population will continue to be a source of disturbance for land on and off of the national forests. Urban infrastructure, including state and county roads, highways and utility facilities and corridors that pass through National Forest System lands will continue to provide pathways for invasive species to enter and establish on the four forests.

The presence of a large human population around the national forests of southern California also serves to stress habitats found on NFS lands. These stresses come from air pollution, altered fire regimes, altered stream flows and soil disturbance. Stressed habitats are more vulnerable to invasion by non-native plants and animals. These past, current and future impacts on the both private and public lands within the four forests combine to produce a high risk of introducing and spreading non-native species.

Recent reductions in the California Department of Agriculture's noxious weed programs are expected to reduce or eliminate biological control projects that might otherwise help control infestations of yellow star-thistle, brooms, bull thistle, spotted knapweed and other invasive non-native plants. Thus, it is apparent that current and reasonably foreseeable actions to control non-native plants and animals will not be sufficient to stem this invasion.

National recognition of the problems invasive species cause and the costs associated with control after they have been introduced has helped to focus attention but the funding needed for current and future management is lacking. Incorporation of the national strategic goal and creation of the forest goal in the 2006 southern California management plans has helped to focus attention towards meeting the desired condition for invasive species management but funds to complete inventories, assess treatment strategies and implement treatments do not meet the need.

The cumulative effect of ground-disturbing activities associated with roads has created a system highly conducive to invasive non-native animal and plant establishment. Propagation of invasive species can and does accelerate exponentially they become established both on the national forests of southern California and adjacent private and public lands.

Invasive non-native species continue to jeopardize the health of ecosystems on southern California national forests by altering ecosystem processes that affect soil chemistry, hydrology, nutrient cycling, intensity and frequency of fire, sediment deposition and erosion. They also continue to compete with native plants and animals and to alter their habitats. The movement and expansion of feral pigs on the Cleveland National Forest, the goldspotted oak borer on the Cleveland and San Bernardino National Forests, and sudden oak death on the Los Padres National Forest are a few recent examples that indicate the profound affect invasive non-native species will continue to have on natural communities.

Invasive non-native species will continue to affect recreation opportunities and natural scenic values, reduce biological diversity and degrade wildlife habitat. Declines in a number of TES wildlife and plant populations on the four forests can be directly attributable to invasive species. With the loss of plant diversity, wildlife habitat, and forage values comes a host of impacts on the uses of such resources, such as hunting, wildlife and wildflower viewing, wilderness values, and livestock grazing. Additionally, the loss of these uses and values can result in economic losses to the human communities in and surrounding the national forests.

Management of large acreages within LUZs that would preclude ground disturbance or as Recommended Wilderness would assist in the conservation of undisturbed habitat within the 37 IRAs. Over the long term, this could reduce the risk of invasive species introduction and spread across the four forests within these areas.

## **Watershed**

The FEIS describes the potential for adverse cumulative watershed effects based on increased development pressure on water resources and national forest lands in general. The LMP amendments would tend to reduce the potential for adverse cumulative watershed effects within the planning area by limiting suitable uses within the BCNM and RW allocations. The amendments would not change the watershed trends for watersheds that are outside of the planning area or outside of the national forests boundaries.

## **Air**

Air quality within the planning area and throughout the four national forests is improving over time as APCDs implement various air pollution control measures. Forest Service project activities are implemented consistent with air quality requirements. The SEIS alternatives would

not change the expected air pollution contribution from national forest activities and no adverse cumulative impacts are expected.

## **Heritage Resources**

It is known that cultural resources (including ethnographic resources and their traditional cultural associations and landscape resources) have been lost or damaged in the national forests through past land management activities, including through development of facilities and infrastructure, visitor use, and natural events. Many of the activities that have affected cultural resources are activities that were initiated prior to the implementation of the National Historic Preservation Act of 1966, as amended.

The destruction or damage of cultural resources on the national forests means the loss of information important to the understanding of the past (including information lost before the development of better research techniques), loss of interpretive opportunities and the incremental loss of the heritage resource base. Adverse cumulative effects result from the advances of time, inadequate or inappropriate maintenance, outright destruction and the steady loss of cultural resources through repeated mitigation of adverse effects rather than intact preservation. This could result in the reduction of cultural resources of a particular type (such as village sites), which diminishes the overall research value of cultural resources on the national forests.

Nevertheless, cultural resources on NFS lands are still afforded a higher level of protection, on average, than those resources on private lands; thus, the public looks to the national forest cultural resources as an increasingly valued resource. Alternative 1, which retains more acres of planned management activities, could reduce cumulative effects as more acreage would be inventoried for cultural resources resulting in more sites documented and managed. But management of sites has not always resulted in a net positive.

Because of the rapid rate of urbanization, the loss of cultural resources, often unmitigated, is putting greater significance on the cultural resources located in the national forests. At the same time, given the changing cultural demographics, some national forest users may not see the relevance of national forest heritage resource protection to their cultural norms and values, which impedes the effort to protect heritage resource sites.

Continual vandalism leads to the destruction of sites and irretrievable loss of information. Vandalism removes the most recognizable artifacts (such as projectile points and grinding stones), which causes misidentification of sites and can result in the proposal of management options that are ineffective. The removal of time-sensitive artifacts like projectile points hinders the research potential and the documentation of past cultural groups and lifeways.

With implementation of the protection and mitigation measures provided by legislation, policy, and the land management plan, the differences in cumulative effects on cultural resources by authorized activities under the different alternatives should be low. The difference in cumulative effects would be through unlawful activities such as vandalism and unmanaged vehicle use. In that sense, Alternatives 2 and 3 provide more protection in regards to cumulative effects than the No Action Alternative, as they are more restrictive in regards to allowable activities.

## **Tribal and Native American Interests**

Due to the rapid rate of urbanization, the loss of natural open space outside national forest boundaries is placing greater importance on the natural open space located inside the national forests. The natural open space within the national forests is afforded a higher level of protection than those resources on private lands, and thus the Native American community looks to national forest natural open space as a valued resource. Alternatives 2, 2a, and 3 would protect the open space characteristics but with a reduction in future access options. This loss of future access options could result in the loss of opportunities for Native American communities to continue to practice traditional and contemporary lifeways and to connect to values held in importance.

## **Recreation**

The Angeles, Cleveland, Los Padres and San Bernardino National Forests have experienced many changes in recreation uses and opportunities since they were established. Those changes have continued over the life of the forest land management plans written in the 1980s and the 2006 LMP. A major concern of the past 50 years has been the large population adjacent to the southern California national forests with its correspondingly heavy visitation and impacts. The effects of that use on other visitors, infrastructure and the natural environment would vary somewhat in this analysis by land use zone classification and access changes.

The cumulative effect area remains within approximately two driving hours of the four forests. The primary issue that could cumulatively affect recreation management is the potential conflict among various recreation uses due to modified land use zones, primarily between motorized and non-motorized recreation users. The cumulative effect of a large population is a high demand for outdoor recreation opportunities offered by the Forest Service and their partners in a mountain setting, which only the southern California national forests offer with relatively easy driving access from major urban areas (see Forest National Visitor Use Monitoring reports).

As the population continues to grow over time there may be increases in motorized and mechanical forms of recreation and day-use activities (such as picnicking, hiking, viewing wildlife and water/snow play). Changes would also occur within each of these categories as the population ages and more ethnically diverse visitors use the national forests. The growth in population and recreation demand coupled with greater access from new technologies has a profound effect on the surrounding national forests. The primarily day-use niches that the national forests offer are being increasingly burdened. And the greatest challenge has become providing quality, environmentally sustainable outdoor recreation opportunities in natural settings.

The range and distribution of recreation settings across the national forests are unique. No other land management agency in southern California administers vast landscapes of foothills, mountains and canyons from Monterey south to San Diego. Alternative 1 does not change these land use zones. Alternatives 2, 2a, and 3 add major areas of backcountry non-motorized and recommended wilderness land use zones as described above. This would have the cumulative effect of changing existing or potential land and management use patterns, restricting some motorized and mechanized recreation while at the same time increasing primitive recreation and solitude.

Designation of additional backcountry non-motorized or recommended wilderness land use zones would not specifically affect the management of existing designated and/or eligible and suitable wild and scenic rivers. However, that change might affect the type of access to and along those rivers as well as some recreation and resource activities. Outstandingly remarkable river values would be perpetuated and protected from long-term social and resource impacts (such as damming and impoundment).

No other national forests are close enough to greatly influence use and management of backcountry recreation in southern California.

In addition to the Angeles, Cleveland, Los Padres and San Bernardino National Forests, other comparable public and private outdoor recreation providers in southern California include:

- Bureau of Land Management lands;

- State of California lands, including

  - Anza-Borrego Desert State Park, Silverwood Lake State Recreation Area, Mt. San Jacinto State Park, Montana del Oro State Park, Cuyamaca Rancho State Park, Castaic Lake State Recreation Area, Hungry Valley State Vehicular Recreation Area, Pismo State Beach, Carpinteria, Oceano Dune, Maleoa, Julia Pfeiffer Burns, Pfeiffer Big Sur, San Simeon and Limekiln State Parks, Emma Ward State Beach, Chino Hills State Park, Gaviota State Beach, El Capitan State Beach;

- National Park lands, including

  - Joshua Tree National Park and Santa Monica Mountains National Recreation Area;

- County lands, including parks and recreation areas in

  - San Bernardino, San Diego, Los Angeles, Santa Barbara, San Luis Obispo, Ventura, Orange and Riverside;

- Numerous local municipal parks and open space; and

- Numerous private recreation facilities and conservation group preserves.

These agencies as well as private entrepreneurs offer developed and dispersed recreation opportunities including camping, fishing, hunting, wildlife viewing, boating, hiking, bicycling, picnicking and four-wheeling. As recreation carrying capacities within the four forests are determined, approached and met, recreationists may be displaced to these areas, assuming that capacity is available.

The Angeles, Cleveland, Los Padres, and San Bernardino National Forests would continue to be the largest provider of mountain and forest outdoor recreation opportunities in southern California in all alternatives.

## **Wilderness**

Wilderness within southern California national forests are significant contributors to the National Wilderness Preservation System. There are few other places in the nation where so many national forest wilderness areas are so close to so many people. Wilderness and recommended wilderness land use zones are important to visitors for scenic beauty, solitude, challenge, and the

absence of motorized, mechanized vehicles and human developments. They are also vital reservoirs of a natural environment that is rapidly diminishing in this area.

In a recent study (Cordell et.al. 2008), many Americans viewed wilderness as important. Two wilderness values stand out. Over 90 percent of the respondents said that the protection of air and water quality is very or extremely important. Four additional values had more than 80 percent of respondents indicating very to extremely important: protecting wildlife habitat, knowing that future generations will have wilderness to visit (bequest value), protecting rare and endangered plant and animal species, and preserving unique wild plants and animals. Other values include: providing scenic beauty, having the option to visit wilderness areas in the future, knowing that wilderness areas exist, providing recreation opportunities, preserving natural areas for science, providing spiritual inspiration, and providing income for the tourist industry.

The large population in southern California and corresponding urban development has a direct relationship with use and resource concerns within wilderness. Fragmentation and isolation of wilderness as ecological islands is a serious concern here. The degree to which fire can be successfully returned to fire-dependent ecosystems within and adjacent to wilderness is a major factor in the long-term benefits of these areas as sources of intact, properly functioning ecosystems. This varies by wilderness because historical fire regimes vary with vegetation cover types. Management of wildlife and fish populations and control of non-native plant invasions both within wilderness and on adjacent lands are other important contributors to the broad functioning of wilderness ecosystems. Finally, management of livestock grazing and recreation use would affect the long-term role that wildernesses can play in contributing to biodiversity and sustainability of the larger systems of which they are a part.

These factors do not vary considerably by alternative specifically for areas already designated as wilderness; therefore, cumulative effects on wilderness would be similar for all three alternatives. It is anticipated that additional regulations would be required over time to protect the wilderness resource and manage the increased use and associated impacts throughout the wilderness. As a result, these components of the National Wilderness Preservation System may continue to contribute to the purposes for which wilderness was designated almost 50 years ago.

The inventoried roadless areas allocated to the RW land use zone would provide more opportunities for primitive unconfined recreation experiences and broaden the ecological diversity within the National Wilderness Preservation System. Designation of new wilderness by the Congress may eventually occur as a result of this decision and/or through potential future legislation. Ultimately, with projected population growth, demand for high-quality wilderness recreation opportunities within the national forests may eventually be exceeded by visitor numbers in all alternatives, especially in smaller, more popular wildernesses adjacent to the urban population centers. With Alternatives 2 and 2a and especially Alternative 3, it is expected that growth in demand for wilderness might be met for a longer period of time. However, some degree of visitor mechanized and motorized access may also be foregone as a result.

The location, size and ecosystem type of designated wilderness in the general vicinity of and their distance from the Recommended Wilderness classification (RW) in Alternative 2 and 2a and especially Alternative 3 is an important factor in determining cumulative effects. Both the federal and state of California governments designate wilderness lands. On the federal side, the Bureau of Land Management, National Park Service, and Fish and Wildlife Service manage wilderness lands in southern California along with the Forest Service. The California

Department of Parks and Recreation administers state designated wilderness. Table 123 summarizes the distribution of wilderness lands by agency within the nine counties that are located within the planning area. Federal wilderness areas occupy a substantial portion of federal lands within Riverside and Ventura counties and significant portions in all other counties except Orange County.

Table 124 displays how the RW allocations would change the distribution of wilderness within the nine county area, assuming that all RW areas for each alternative were designated as wilderness. Figure 8 shows the RW areas proposed under Alternative 2/2a with the existing wilderness areas designated in the nine county area.

It is important to note that an RW allocation is a preliminary determination by the Forest Service, subject to change by the Chief. Actual wilderness designation depends on congressional action and presidential approval. For analysis purposes, Table 124 assumes all RW areas would become wilderness. As shown in Table 124, Alternatives 2 and 2a would have little noticeable increase in the overall federal wilderness system but increases would be locally noticeable in Los Angeles and San Diego counties where new wilderness areas would be recommended. All wilderness recommended in this alternative is part of the Southern California Mountains and Valleys Ecoregion. Alternative 3 would increase the proportion of federal lands allocated to wilderness in all counties. In particular, there would be large increases in wilderness proportions in Orange, Santa Barbara, and Ventura Counties under Alternative 3. About 70% of the wilderness recommended in this alternative is part of the Southern California Mountains and Valleys Ecoregion, with another 20% in the Central Valley Coast Ranges Ecoregion. The remainder would encompass the Sierra Nevada Foothills and Southern California Coast Ecoregions. As shown in Figure 8, most existing southern California federal wilderness is part of the Mojave Desert Ecoregion.

The IRA Analysis in Appendix 2 considers nearby wilderness areas for each individual IRA.

**Table 123. Summary of Federal and State Wilderness by County**

County	Total BLM/FS/FW S/NPS Area in Acres <sup>6</sup>	BLM Wilderness	FS Wilderness	FWS Wilderness	NPS Wilderness	Total Federal Wilderness <sup>7</sup>	Total Federal Wilderness	State Park Lands	State Wilderness Lands	State Wilderness Lands
	Acres	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Percent
Kern	1,127,976	140,874	67,633			208,507	18%	29,644		0%
Los Angeles	681,388		123,856			123,856	18%	51,355		0%
Orange	55,373		2,127			2,127	4%	9,908		0%
Riverside	2,543,238	731,396	125,844		498,094	1,355,334	53%	135,672	51,500	38%
San Bernardino	8,240,890	1,844,326	74,860	2,797	1,096,546	3,018,529	37%	21,664		0%
San Diego	464,689	65,669	40,271			105,941	23%	1,045,505	431,469	41%
San Luis Obispo	431,696	2,515	51,194			53,709	12%	23,520		0%
Santa Barbara	704,128		256,837			256,837	36%	7,589		0%
Ventura	574,420		278,166			278,166	48%	29,294	6,276	21%
<b>Grand Total</b>	<b>14,823,797</b>	<b>2,784,780</b>	<b>1,020,788</b>	<b>2,797</b>	<b>1,594,640</b>	<b>5,403,006</b>	<b>36%</b>	<b>1,354,151</b>	<b>489,245</b>	<b>36%</b>

<sup>6</sup> From BLM records, excluding private land inholdings

<sup>7</sup> From [www.wilderness.net](http://www.wilderness.net), wilderness areas include private and other land inholdings.



**Table 124. Summary of Recommended Wilderness by Alternative.**

County	Total BLM/FS/FWS/NPS Area	Total Federal Wilderness	Total Federal Wilderness	Alt 1 RW	Alt 1 Total Federal Wilderness	Alt 2 RW	Alt 2 Total Federal Wilderness	Alt 2a RW	Alt 2a Total Federal Wilderness	Alt 3 RW	Alt 3 Total Federal Wilderness
	Acres	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Kern	1,127,976	208,507	18%		18%		18%		18%	41,128	22%
Los Angeles	681,388	123,856	18%		18%	41,065	24%	42,332	24%	72,956	29%
Orange	55,373	2,127	4%		4%		4%		4%	22,189	44%
Riverside	2,543,238	1,355,334	53%	8,011	54%	8,011	54%	8,011	54%	26,213	54%
San Bernardino	8,240,890	3,018,529	37%	10,207	37%	10,204	37%	10,847	37%	28,555	37%
San Diego	464,689	105,941	23%		23%	41,535	32%	43,609	32%	43,824	32%
San Luis Obispo	431,696	53,709	12%		12%		12%		12%	35,415	21%
Santa Barbara	704,128	256,837	36%	5,306	37%	5,306	37%	5,306	37%	138,617	56%
Ventura	574,420	278,166	48%		48%		48%		48%	124,205	70%
<b>Grand Total</b>	<b>14,823,797</b>	<b>5,403,006</b>	<b>36%</b>	<b>23,524</b>	<b>37%</b>	<b>106,122</b>	<b>37%</b>	<b>110,106</b>	<b>37%</b>	<b>533,102</b>	<b>40%</b>



## **Landscape Management**

As described in the FEIS (page 524), cumulative effects on national forest landscapes result from the introduction of a series of vegetation management activities or the addition of structural elements in a close geographic proximity or time frame. Landscape cumulative effects are more pronounced in foreground situations and less so in the background. The potential for cumulative effects within the planning area would decrease under Alternatives 2, 2a, and 3 as the landscapes are managed for a more natural appearance. The potential for cumulative effects outside of the planning area on adjacent national forest system lands remains the same as described in the FEIS. The FEIS identified several places where none of the alternatives would meet the near term desired landscape character due to the cumulative effects of vegetation treatment, utility development, and other factors. Two of those areas described in the FEIS, the San Bernardino Front and the Elsinore Places, are adjacent to the planning area.

## **Law Enforcement**

As described in the 2006 FEIS, the amount and frequency of law enforcement incidents are expected to increase over the next 15 years as national forest visitation increases and as the amount of vehicle travel that occurs through and within the national forests increases over the planning period. These trends are not expected to change or vary between the alternatives.

## **Roads and Trails**

The overall public transportation system will remain fairly static within the four national forests due to limited funding for new road and trail construction. The public demand for access to National Forest System lands will increase in the future with increasing local and regional population. Conflicts between user groups would also increase as users overlap within a relatively fixed system. Future motorized road opportunities in roadless areas are restricted throughout the forests by the RACR.

## **Livestock Grazing**

Management of the various resources and uses on the four forests can have both a positive and negative effect on the management of livestock grazing on and off the forests. As recreation use continues to increase, the complexity of management of livestock grazing also increases. Livestock grazing and people often prefer the same areas and conflicts between the two can be expected to increase. Many ranchers depend on grazing areas administered by the Forest Service to provide a portion of their year-round operations and viability. Many of the grazing areas will continue to support livestock operations and remain an important element of multiple uses on the four forests. This in turn will provide for stability in the ranching communities in the remaining rural areas in and around the forests. Urbanization, increases in property values, high recreation use and increased listing of threatened and endangered species have led to the decline in the demand and desirability of some grazing areas. As ranchers sell out and their private ranches are subdivided, there is a net loss of open space and habitat linkages and an increase in urbanization conflicts such as trespass and unauthorized use.

Loss of livestock grazing permit holders negatively affects wildlife and recreation equestrian use because of the lack of maintenance on developed water sources. Current Forest Service staffing

would be unable to maintain all existing structural improvements on the four southern California national forests.

Livestock grazing, when managed at the moderate use level, can exist as a multiple use of the national forests while providing protection of other valuable biological, botanical and vegetative communities located in the diverse ecosystems on the forest. Through the implementation of land management plan design criteria, the sustainability of the forest resources is protected for the reasonably foreseeable future.

## **Minerals**

As described in the 2006 FEIS (pages 577 and 578), the cumulative effects on mineral and energy resources result primarily from the following factors:

- The increasing acreage of public land that is withdrawn from mineral entry such as wilderness, research natural areas and other special management areas. In addition to withdrawal, there may be other loss of mineral extraction opportunities due to special designations.
- The increasing number of stipulations and conditions associated with permit processing and granting.
- The increased cost of reclamation and bonding by regulatory agencies.
- Loss of alternative sites as more land area is urbanized.
- Increased vandalism and conflicts with other national forest users.

The FEIS concluded that these factors combine to reduce the amount of land available to exploration and development of minerals and energy operations on NFS lands. The LMP amendments considered in this supplemental analysis will be consistent with this conclusion.

## **Non-Recreation Special Uses**

The reduction in areas suitable for non-recreation special uses could increase the demand for those uses on other suitable areas. Other planning direction, particularly LMP standards, may also restrict development of suitable uses independent of LUZs. The LMP amendments are not expected to reduce the capacity of the four national forests to respond to permit requests on the available lands.

## **Private Lands**

The amount of private land within the boundaries of the national forests is expected to decline as land is acquired through voluntary sale or donation. The rate of acquisition depends on available funding and the availability of willing sellers as well as the overall management objective for a specific area of the forest. While the overall trend will not change as a result of the LMP amendments, the greater level of RW allocations under Alternatives 2, 2a and 3 could increase the priority of acquisition for land within those areas and also improve management of larger blocks of undeveloped land.

## Wildfire

The LMP amendments will not change the cumulative impacts described in the FEIS (page 588). Fire occurrence is expected to increase over time as use levels on the national forests increase, increasing the potential for wildfire starts. Fire suppression complexity will increase as areas adjacent to the forest are developed. The LMP amendments would not change the focus of community protection projects. Wildfire suppression costs might decline over time as community defense projects are implemented, reducing the level of suppression resources needed to protect communities.

## Economics

Because the proposed LUZ amendments are limited in scope, the overall economic impact between alternatives is not substantially different when viewed from a forest-wide scale. The economic impact of the proposed LUZ amendments should be similar to the effects described in the 2006 FEIS for Plan Revision Alternative 3 (FEIS, pp. 462-469). The mix of LUZs emphasized in Alternatives 2, 2a, and 3 provide for a mix of recreation and commodities that would be suitable within the 37 IRAs, minimizing the economic impact of the proposed amendments. It is not anticipated that there will be any additional impacts from any of the alternatives on the number of jobs and labor income. The appropriated funding to the four national forests is anticipated to decrease over the foreseeable future and any changes made by this amendment are not expected to change the allocation received by each forest.

## Other Required Disclosures

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NEPA at 40 CFR 1502.25(a) directs “to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with ...other environmental review laws and executive orders.”

As described in Chapter 1, there are no other permitting requirements for this planning decision. The Forest Service is consulting with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in accordance with the ESA implementing regulations.

## Environmental Justice

The Final EIS for the Revised LMPs discusses environmental justice on pages 473 to 475. As stated in the US Environmental Protection Agency (EPA) web site, environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. References to USDA, Departmental Regulation number 5600-2, and Executive Order 12898 Federal actions to Address Environmental Justice in Minority Populations and Low-income Populations are included in Part 3, Design Criteria, and in Part 3, Appendix A of the forest plans.

The Final EIS recognized that the Hispanic/Latino segment of the population continues to grow to major proportions, reaching 40% in the area defined as the Southern California Association of Governments. In this area, composed of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura counties, the number of Hispanics exceeded the number of whites in the 2000 Census. While there are no barriers to visitation by Hispanics and minorities to the

national forests, there is much to do to facilitate and enhance the available recreation experiences on national forests for Hispanics and other ethnic groups. The National Visitor Use Monitoring (NVUM) results available for the Angeles, Cleveland, San Bernardino and Los Padres National Forests show that the great majority of national forest visitors are white. National Forest visitation is therefore not representative of the ethnic mix of the larger surrounding population but it is expected that the disparity will decrease. Program emphasis in each of the forest plans recognizes the important and increasing presence of non-white ethnic groups, which calls for proactive management to implement bilingual and conservation education measures, to consider ethnic needs in making the national forest more attractive and hospitable, and to consider ethnic needs in the configuration and design of facilities. Further, there is an identified need for outreach to communities to create higher awareness of the opportunities to participate in national forest activities and participative discussions concerning national forest management.

The Final EIS noted that land zoning decisions in the forest plans revolve around degree of access: motorized (automobile, high-clearance vehicle, and trail), and non-motorized (mountain bike, equestrian, and hiking). Each of the land use zones carries a different emphasis for access as detailed in table 2.3.2, Suitable Uses Public Use and Enjoyment, of each forest plan. The level of access ranges from general motorized access for a variety of activities including developed recreation sites to very restricted non-motorized access as exemplified by wilderness. Visitation data from NVUM show that participation in wilderness hiking has a low rate of participation by non-whites and is not reflective of the demographic mix of the surrounding populations. Rather, the NVUM data suggest that non-whites are more inclined to utilize the developed recreation facilities. It might be supposed that alternatives with greatest emphasis on wilderness (such as Alternatives 3 and 6) are therefore discriminatory against non-whites. However, in those alternatives where additional wilderness is proposed there is no corresponding decrease or substitution for developed sites. The zoning has been constructed to allow continued access to existing developed recreation facilities even as wilderness increases. Dispersed recreation does decrease as formerly accessible land is replaced by wilderness and as general purpose roads are closed or designated for administrative use only. However, roads are equally accessible (or inaccessible) by everyone and any increase or decrease in roads has a proportionate effect on all groups. Thus, developed recreation activities favored by non-whites are not displaced by wilderness and impacts on dispersed recreation are proportionate to all groups.

As described in the recreation and roads and trails analysis, the action alternatives will maintain existing road access while further limiting future road development. The limitation in road construction would occur under the Roadless Area Conservation Rule, regardless of any land use zoning changes. The effects of the alternatives are consistent with the analysis in the Final EIS, and will not disproportionately impact minority or disadvantaged groups.

## **Monitoring**

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Monitoring, or changing the monitoring methodology, is not expected to impact any resource. The monitoring alternatives will be evaluated according to legal requirements, cost, and economic efficiency.

### **Alternative A – No Action**

The Monitoring No Action Alternative meets the requirements under the 1982 Planning Rule (36 CFR 219) by establishing intervals to evaluate how well objectives have been met and how closely management standards and guidelines have been applied through sampling of implementation. The expected precision and reliability of the monitoring process and the time when evaluation would be reported is included in the existing monitoring plan.

There would be no change from existing conditions with the Monitoring No Action alternative. The analysis of Alternative 4a documented in the 2006 FEIS covers this alternative. Monitoring information would be formally evaluated in response to monitoring questions and regulatory review requirements, and reported every five years. This monitoring focuses on the establishment of baselines and the use of available information to monitor the implementation of Forest Plan standards and guidelines. Implementation and effectiveness monitoring feed back into an adaptive management cycle for projects and the Forest Plan. The first fifth-year evaluations were reported in fiscal year 2011. Evaluation of the monitoring protocol itself indicated the need for some changes to improve monitoring feasibility, efficiency and effectiveness. These improvements form the basis for the amendments being proposed in Alternative B.

The costs for each of the three parts of the Forest Plans were based on the description of monitoring for each part (Tables 125 to 127). Person days were estimated on each of the four Forests for each of the three parts of the Forest Plans. The person day estimates from the Forest that had the greatest limitation to implementing monitoring were used to calculate costs. Part 1 person days are based on the monitoring action described in each alternative. Part 2 person days are based on the summary of reported information and the cost is constant between alternatives. Part 3 person days are based on the 10% random sampling strategy for new projects (110 average new projects per year per Forest) and the fixed number of certain types of ongoing activities and sites. Annual monitoring on average is conducted by four interdisciplinary specialists and at least one new project or ongoing activity and site could be monitored per day. Up to 2.5 person days per project could be spent in preparation (project selection, project file review) and report writing. It is assumed that each person day costs on average \$370.

**Table 125. Monitoring No Action - Part 1 Cost/Forest**

Goals	Indicators	5 year - Person Days	Cost (\$)
1.1	Fire Hazard/Risk	25	9,250
1.2.1	Condition Class	10	3,700
1.2.2	Condition Class	10	3,700
1.2.3	Veg. Type Extent Fire	10	3,700
2.1	Invasive Plants and Animals	10	3,700
3.1	Visitor Satisfaction	5	1,850
3.2	Natural Processes	5	1,850
	Wilderness	1	370
4.1a	Energy Success at protecting Ecosystem Health	25	9,250
4.1b	Renewable Resources Success at protecting Ecosystem Health	10	3,700
4.2	Utility Corridors	1	370
5.1	Sustaining Class 1 watershed conditions while reducing the number of Condition Class 2 & 3 watersheds	65	24,050
5.2	Stream Condition - in Impaired State listed 303(d) streams	10	3,700
6.1	Rangeland Condition	10	3,700
6.2	MIS	120	44,400
7.1	Road Density Inventories	2	740
	Road Miles	5	1,850
	Land Ownership Complexity	2	740
Total		326	120,620

**Table 126. Monitoring No Action - Part 2 Cost/Forest**

Requirement	Monitoring Action	5 year - Person Days	Cost (\$)
Reporting Targets	19 Targets	5	1,850



**Table 127. Monitoring No Action - Part 3 Cost/Forest**

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
<b>Management &amp; Administration</b>			0	0	-	0	-
• General Management			0	0	-	0	-
• District Management			0	0	-	0	-
• Effective Management			0	0	-	0	-
• Tribal Relations			0	0	-	0	-
• Partnerships			0	0	-	0	-
<b>Resource Management</b>	3		12	7.5	3,885	97.5	36,075
• Wildlife, Fish and Plant Management			0	0	-	0	-
• Invasive Species			0	0	-	0	-
• Vegetation Management			0	0	-	0	-
○ Mortality Removal			0	0	-	0	-
○ Thinning			0	0	-	0	-
○ Reforestation & Restoration of Forest Vegetation			0	0	-	0	-
○ Fuelbreak Maintenance			0	0	-	0	-
○ Fuelbreak Construction			0	0	-	0	-
○ WUI Defense and Threat Zones			0	0	-	0	-
○ Prescribed Fire			0	0	-	0	-
• Physical Resources (Soil, Geology, Water and Air)			0	0	-	0	-
• Land Ownership and Adjustment			0	0	-	0	-
• Special Area Management			0	0	-	0	-
• Heritage Resources			0	0	-	0	-
<b>Public Use &amp; Enjoyment</b>	3		12	7.5	3,885	97.5	36,075
• Campgrounds and Developed Sites		2	8	5	1,850	65	24,050

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
• Concentrated Use Areas		2	8	5	1,850	65	24,050
• Recreation		2	8	5	1,850	65	24,050
• Conservation Education			0	0	-	0	-
• Landscape and Scenery Management			0	0	-	0	-
• Law Enforcement			0	0	-	0	-
Facilities Operations & Maintenance	1		4	2.5	1,295	32.5	12,025
• Buildings, Grounds & Utilities			0	0	-	0	-
• Roads		1	4	2.5	925	32.5	12,025
• Trails		1	4	2.5	925	32.5	12,025
Commodity & Commercial Uses	3		12	7.5	3,885	97.5	36,075
• Non-Recreation Special-Uses		1	4	2.5	925	32.5	12,025
• Water			0	0	-	0	-
• Minerals and Non-Renewable Energy Resources			0	0	-	0	-
• Grazing		2	8	5	1,850	65	24,050
• Forest Biomass			0	0	-	0	-
Fire & Aviation Management	1		4	2.5	1,295	32.5	12,025
<b>Total</b>	<b>11</b>	<b>11</b>	<b>88</b>	<b>55</b>	<b>52,910</b>	<b>715</b>	<b>264,550</b>

## **Alternative B – Proposed Action**

The Monitoring Proposed Action Alternative is a refinement of the No Action alternative and meets the requirements under the 1982 Planning Rule (36 CFR 219), the same as the No Action alternative.

Monitoring questions and indicators have been updated to respond to issues identified through monitoring. A monitoring question was added for forest health restoration, and the invasive species monitoring question was updated to respond to a measurable indicator. Monitoring information would be formally evaluated in response to monitoring questions and regulatory review requirements, and reported every five years. Annually one newly implemented project randomly selected from each of the five functional areas available for implementation and one ongoing activity and/or site randomly selected from each of the three available functional areas would be monitored to determine consistency with the Forest Plans and implementation of design criteria.

This monitoring focuses on the use of available information to monitor the implementation of Forest Plan standards and guidelines. The standard and guidelines established in the Forest Plans would be implemented. The movement toward desired conditions would be achieved through the adaptive management cycle of implementation, monitoring, evaluation, amendment/revision, and decision. The economic impact from the Proposed Action Monitoring Alternative would not be a change from current conditions. The monitoring guides for each Forest have adapted over time to improve monitoring implementation feasibility, efficiency and effectiveness, and these improvements form the basis for the amendments being proposed in this alternative. These recommendations have been made based on monitoring implementation feasibility and effectiveness. The economic impact would be the lowest of the three monitoring alternatives analyzed in detail.

The costs for each of the three parts of the Forest Plans were based on the description of monitoring for each part (Tables 128 to 130). Person days were estimated on each of the four Forests for each of the three parts of the Forest Plans. The person day estimates from the Forest that had the greatest limitation to implementing monitoring were used to calculate costs. Part 1 person days are based on the monitoring action described in each alternative. Part 2 person days are based on the summary of reported information and the cost is constant between alternatives. Part 3 person days are based on the functional area random sampling strategy. The estimated costs are based on the minimum requirement under the alternative and could be higher if more new projects and ongoing activities and sites are selected. Annual monitoring on average is conducted by four interdisciplinary specialists and at least one new project or ongoing activity and site could be monitored per day. Up to 2.5 person days per project could be spent in preparation (project selection, project file review) and report writing. It is assumed that each person day costs on average \$370.

**Table 128. Monitoring Proposed Action - Part 1 Cost/Forest**

Goals	Indicators	5 year - Person Days	Cost (\$)
1.1	Acres of High Hazard and High Risk in WUI Defense Zone	25	9,250
1.2	Mortality Risk Assessment	10	3,700
1.2.1	Departure from desired fire regime, acres by Fire Regime I	10	3,700
1.2.2	Departure from desired fire regime, acres by Fire Regime IV	10	3,700
1.2.3	Departure from desired fire regime, acres by Fire Regime V	10	3,700
2.1	Acres of treatments in reported occurrences	10	3,700
3.1	Visitor Satisfaction (NVUM)	5	1,850
3.2	Wilderness Condition	10	3,700
4.1a	Number of Mineral and Energy Development Projects Proposed and Approved	2	740
	Minerals and Energy Success at protecting Ecosystem Health	23	8,510
4.1b	Number of Renewable Resource Projects Proposed and Approved	2	740
	Renewable Resources Success at protecting Ecosystem Health	8	2,960
5.1	Number of Watersheds in each Condition Class	65	24,050
5.2	Change in Indicator Score for Aquatic Habitat, Aquatic Biota and Riparian Vegetation	10	3,700
6.1	Percent of key areas in active allotments meeting or moving towards desired conditions	10	3,700
6.2	MIS Habitat Condition	120	44,400
7.1	Land Ownership Complexity	2	740
	Authorized and Administrative Infrastructure	10	3,700
	Inventoried Unclassified Motorized Routes	120	44,400
<b>Total</b>		<b>462</b>	<b>170,940</b>

**Table 129. Monitoring Proposed Action - Part 2 Cost/Forest**

Requirement	Monitoring Action	5 year - Person Days	Cost (\$)
Reporting Targets	18 Targets	5	1,850

**Table 130. Monitoring Proposed Action - Part 3 Cost/Forest**

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
<b>Management &amp; Administration</b>			0	0	-	0	-
• General Management			0	0	-	0	-
• District Management			0	0	-	0	-
• Effective Management			0	0	-	0	-
• Tribal Relations			0	0	-	0	-
• Partnerships			0	0	-	0	-
<b>Resource Management</b>	1		4	2.5	1,295	32.5	12,025
• Wildlife, Fish and Plant Management			0	0	-	0	-
• Invasive Species			0	0	-	0	-
• Vegetation Management			0	0	-	0	-
○ Mortality Removal			0	0	-	0	-
○ Thinning			0	0	-	0	-
○ Reforestation & Restoration of Forest Vegetation			0	0	-	0	-
○ Fuelbreak Maintenance			0	0	-	0	-
○ Fuelbreak Construction			0	0	-	0	-
○ WUI Defense and Threat Zones			0	0	-	0	-
○ Prescribed Fire			0	0	-	0	-
• Physical Resources (Soil, Geology, Water and Air)			0	0	-	0	-
• Land Ownership and Adjustment			0	0	-	0	-
• Special Area Management			0	0	-	0	-
• Heritage Resources			0	0	-	0	-
<b>Public Use &amp; Enjoyment</b>	1	1	8	5	2,220	65	24,050
• Campgrounds and Developed Sites			0	0	-	0	-

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
• Concentrated Use Areas			0	0	-	0	-
• Recreation			0	0	-	0	-
• Conservation Education			0	0	-	0	-
• Landscape and Scenery Management			0	0	-	0	-
• Law Enforcement			0	0	-	0	-
<b>Facilities Operations &amp; Maintenance</b>	1	1	8	5	2,220	65	24,050
• Buildings, Grounds & Utilities			0	0	-	0	-
• Roads			0	0	-	0	-
• Trails			0	0	-	0	-
<b>Commodity &amp; Commercial Uses</b>	1	1	8	5	2,220	65	24,050
• Non-Recreation Special-Uses			0	0	-	0	-
• Water			0	0	-	0	-
• Minerals and Non-Renewable Energy Resources			0	0	-	0	-
• Grazing			0	0	-	0	-
• Forest Biomass			0	0	-	0	-
<b>Fire &amp; Aviation Management</b>	1		4	2.5	1,295	32.5	12,025
<b>Total</b>	<b>5</b>	<b>3</b>	<b>32</b>	<b>20</b>	<b>19,240</b>	<b>260</b>	<b>96,200</b>

### **Alternative C – Extensive Monitoring**

The Extensive Monitoring Alternative meets the requirements under the 1982 Planning Rule (36 CFR 219) by establishing intervals to evaluate how well objectives have been met and how closely management standards and guidelines have been applied through sampling of implementation. The expected precision and reliability of the monitoring process and the time when evaluation would be reported is disclosed.

The standards and guidelines established in the Forest Plans would be ensured through the higher level of monitoring. The compliance with the Forest Plan would not be improved to a degree commensurate with the increased costs due to the diminishing returns of increased data collection for every project rather than a sample. The higher workload of establishing baselines, monitoring, and evaluation would reduce the number of projects analyzed and implemented each year; thereby, reducing the availability of goods and services, and decreasing the opportunity to move toward desired conditions for some Forest Goals. The economic impact would be the highest of the three monitoring alternatives analyzed in detail.

The costs for each of the three parts of the Forest Plans were based on the description of monitoring for each part (Tables 131 to 133). Person days were estimated on each of the four Forests for each of the three parts of the Forest Plans. The person day estimates from the Forest that had the greatest limitation to implementing monitoring were used to calculate costs. Part 1 person days are based on the monitoring action described in each alternative. Part 2 person days are based on the summary of reported information and the cost is constant between alternatives. Part 3 person days are based on the 20% sampling strategy and functional area validation random sampling strategy. Annual monitoring on average is conducted by four interdisciplinary specialists and at least one new project or ongoing activity and site could be monitored per day. Up to 2.5 person days per project could be spent in preparation (project selection, project file review) and report writing. It is assumed that each person day costs on average \$370.

**Table 131. Extensive Monitoring - Part 1 Cost/Forest**

Goals	Indicators	5 year - Person Days	Cost (\$)
1.1	Acres of fuelbreaks constructed or maintained in WUI	10	3,700
	Acres of watershed treated in WUI	15	5,550
1.2	Acres of vegetation treatment by condition class	50	18,500
	Acres of prescribed and wildland fire by condition class	50	18,500
	Mortality Risk Assessment	10	3,700
2.1	Trend of non-native invasive species populations	100	37,000
	Acres of non-native invasive species treatment or retreatment	10	3,700
3.1	Number of cultural sites recorded	5	1,850
	Miles of roads and trails in culturally sensitive areas	15	5,550
	Acres of recreation facilities in culturally sensitive areas	25	9,250
	Number of tribal coordination meetings	2	740
	Number of recreation facilities by use type	5	1,850
	Miles of public roads and trails by use type	5	1,850
	Visitor Satisfaction	5	1,850
	Miles of roads and trails in riparian areas and critical T&E habitat	0	-
	Acres of recreation facilities in riparian areas and critical T&E habitat	15	5,550
	Number of Recreation Residence cabin permits	5	1,850
	Acres of Recreation Residence tracts in riparian areas and critical T&E habitat	25	9,250
	Number of Organizational Camp permits	5	1,850
	Acres of Organizational Camps in riparian areas and critical T&E habitat	25	9,250
	Number of programs sponsored	2	740
	3.2	Wilderness Evaluation scores	5
Visitor Satisfaction		5	1,850
Acres of Wilderness		1	370
4.1	Miles of authorized transmission and distribution powerlines/ gas lines	5	1,850
	Number of Transportation and Utility corridors	1	370
	Miles of authorized transmission and distribution powerlines/ gas lines in riparian areas and critical T&E habitat	15	5,550
	Number of authorized oil and gas operations	5	1,850
	Acres of oil and gas operations in riparian areas and critical T&E habitat	15	5,550
	Number of authorized plans of operation	1	370
	Acres of mining operations in riparian areas and critical T&E habitat	15	5,550
5.1	Watershed Condition Class evaluation	65	24,050
	Miles of road decommissioned	10	3,700
	Acres of watershed treated	15	5,550
	Number of road and trail watercrossings by type	15	5,550
	Number of water extractions by watercourse	20	7,400
	Number of TMDL listed waterbodies	1	370
	Miles of roads and trails by soil type	15	5,550
5.2	Watershed Condition Class evaluation	10	3,700
	Number of 303d listed watercourses	1	370
	Number of CRMPs	1	370
	Acres of primary song sparrow habitat	0	-
6.1	Number of allotments	5	1,850
	Percent of key areas in active allotments meeting or moving towards desired conditions	10	3,700
6.2	Acres of primary Management Indicator/Focal Species habitat	5	1,850



Goals	Indicators	5 year - Person Days	Cost (\$)
	Habitat Condition Assessment	120	44,400
	Number of listed species	5	1,850
	Acres of critical habitat	10	3,700
	Biological Opinion implementation monitoring	25	9,250
	Acres of habitat linkages	50	18,500
	Miles of roads and trails in essential habitat linkages	15	5,550
<b>7.1</b>	Acres of prescribed and wildland fire	0	-
	Mortality Risk Assessment	0	-
	Acres of vegetation treatment by condition class	0	-
	Acres of prescribed and wildland fire by condition class	0	-
	Acres of IRAs	5	1,850
	Miles of roads and motorized trails in IRAs	15	5,550
	Number of RNA Management Plans	5	1,850
	Acres of land acquired	10	3,700
	Number of communication sites	5	1,850
	Miles of authorized water lines	15	5,550
	Acres of authorized infrastructure in riparian areas and critical T&E habitat	25	9,250
	Miles of authorized roads	15	5,550
	Miles of administrative roads	5	1,850
	Miles of OHV roads and trails	5	1,850
	Miles of Unauthorized Motorized Routes	120	44,400
	Miles of roads in riparian areas and critical T&E habitat	15	5,550
	<b>Total</b>	<b>1090</b>	<b>403,300</b>

**Table 132. Extensive Monitoring - Part 2 Cost/Forest**

Requirement	Monitoring Action	5 year - Person Days	Cost (\$)
All projects would be monitored each year	Summary of the actions each year	5	1,850

**Table 133. Monitoring Proposed Action - Part 3 Cost/Forest**

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
<b>New Project &amp; Ongoing Activities and Site Monitoring</b>							
<b>20%</b>	22	560	582	20	222,740	3010	1,113,700
<b>Validation Monitoring</b>							
<b>Management &amp; Administration</b>			0	0	-	0	-
• General Management			0	0	-	0	-
• District Management			0	0	-	0	-
• Effective Management			0	0	-	0	-
• Tribal Relations			0	0	-	0	-
• Partnerships			0	0	-	0	-
<b>Resource Management</b>	1		4	2.5	1,295	32.5	12,025
• Wildlife, Fish and Plant Management			0	0	-	0	-
• Invasive Species			0	0	-	0	-
• Vegetation Management			0	0	-	0	-
o Mortality Removal			0	0	-	0	-
o Thinning			0	0	-	0	-
o Reforestation & Restoration of Forest Vegetation			0	0	-	0	-
o Fuelbreak Maintenance			0	0	-	0	-
o Fuelbreak Construction			0	0	-	0	-
o WUI Defense and Threat Zones			0	0	-	0	-
o Prescribed Fire			0	0	-	0	-
• Physical Resources (Soil, Geology, Water and Air)			0	0	-	0	-
• Land Ownership and Adjustment			0	0	-	0	-
• Special Area Management			0	0	-	0	-

Functional Area	Number of New Projects	Number of Ongoing Activities/Sites	Annual - Monitoring Person Days	Annual - Preparation/ Report Writing Person Days	Cost (\$)	Five Year Sum - Person Days	Five Year Sum - Cost (\$)
• Heritage Resources			0	0	-	0	-
Public Use & Enjoyment	1	1	8	5	2,220	65	24,050
• Campgrounds and Developed Sites			0	0	-	0	-
• Concentrated Use Areas			0	0	-	0	-
• Recreation			0	0	-	0	-
• Conservation Education			0	0	-	0	-
• Landscape and Scenery Management			0	0	-	0	-
• Law Enforcement			0	0	-	0	-
Facilities Operations & Maintenance	1	1	8	5	2,220	65	24,050
• Buildings, Grounds & Utilities			0	0	-	0	-
• Roads			0	0	-	0	-
• Trails			0	0	-	0	-
Commodity & Commercial Uses	1	1	8	5	2,220	65	24,050
• Non-Recreation Special-Uses			0	0	-	0	-
• Water			0	0	-	0	-
• Minerals and Non-Renewable Energy Resources			0	0	-	0	-
• Grazing			0	0	-	0	-
• Forest Biomass			0	0	-	0	-
Fire & Aviation Management	1		4	2.5	1,295	32.5	12,025
<b>Total</b>	<b>27</b>	<b>563</b>	<b>614</b>	<b>40</b>	<b>241,980</b>	<b>3,270</b>	<b>1,209,900</b>

Implementation of design criteria would be monitored for 20% of new projects (110 average new projects per year per Forest) on an annual basis, and would be tracked as part of the environmental analysis and implementation. Monitoring would also be done through the administration, operations, and maintenance phases for 20% of ongoing activities and sites (2,800 average ongoing activities and sites per Forest). Cumulatively, it is assumed that over a five year period 100% of new projects and ongoing activities and sites would be monitored. Annual monitoring would primarily be a documentation of actions taken to implement, maintain, and administer the associated project, activity, or site. It is expected that this monitoring would take approximately 1 person day per project. In order to validate the annual monitoring, a random sampling of implementation monitoring would be reviewed at the Forest level for both new projects and ongoing activities and sites. Annually one newly implemented project randomly selected from each of the five functional areas available for implementation and one ongoing activity and/or site randomly selected from each of the three available functional areas would be monitored to determine consistency with the Forest Plans and implementation of design criteria.

### Comparison of Alternatives

The comparison of costs for each Forest is broken out for each of the three parts of the Forest Plans by alternative (Table 134). Part 3 costs are displayed annually and then summed over a five year period. The total cost by alternative is based on Part 1, Part 2, and the five year sum from Part 3. Alternative C – Extensive Monitoring has the highest cost over a five year period and Alternative B –Monitoring Proposed Action has the lowest.

**Table 134. Comparison of Cost/Forest by Alternative**

Alternative	Part 1 (\$)	Part 2 (\$)	Part 3 (\$)		5 year Total (\$)
			Annual	5 year sum	
Alternative A	120,620	1,850	52,910	264,550	<b>387,020</b>
Alternative B	170,940	1,850	19,240	96,200	<b>268,990</b>
Alternative C	403,300	1,850	241,980	1,209,900	<b>1,615,050</b>

### Economic Efficiency

The overall emphasis and direction in the Forest Plans will not be changed and therefore the budgets are expected to remain on the same trend (decreasing). In fiscal year 2013 the appropriated funding for the four national forests are: Angeles National Forest \$5,323,000, Cleveland National Forest \$3,524,000, Los Padres National Forest \$4,441,000, and San Bernardino National Forest \$5,726,000. Using an average of the fiscal year 2013 appropriated funding and projecting five years with a constant funding level, each forest would receive a sum of \$23,767,500 over the next five years in appropriate funding. The average funding for Forest Plan monitoring in fiscal year 2013 is \$28,000 per forest.

Based on the projected appropriated funding over the next five years, monitoring would be approximately 2% under Alternative A – Monitoring No Action, 1% under Alternative B – Monitoring Proposed Action, and 7% under Alternative C– Extensive Monitoring of the total appropriated budget. Based on the fiscal year 2013 appropriated funding for Forest Plan monitoring, annual monitoring under Alternative A would be approximately 189% of the budget,

Alternative B would be approximately 69% of the budget, and Alternative C would be approximately 864% of the budget.

Given the expected trend of appropriated budgets, the amount spent on monitoring has a large impact on the Forests' ability to provide goods and services throughout all resource areas. These impacts could include a reduction in the number of new projects implemented, the number of authorizations authorized and administered, and the infrastructure open and maintained. All of these actions would have indirect effects that would require funding and resources to be shifted away from public services to resource protection. More funding and resources would be dedicated to enforcement of closures.

Alternative A has a higher annual monitoring cost, but a lower fifth year cost (based on the sum of Part 1, Part 2, and Part 3 annual costs) than Alternative B. Other appropriated funding is needed to supplement annual monitoring, but the five-year total monitoring cost is only marginally higher than Alternative B. The difference in cost between Alternative A and Alternative B are based on the lessons learned since the plans were revised in 2006. There is greater focus and flexibility in the new projects and ongoing activities and sites monitored annually under Alternative B. The number of indicators monitored under Alternative B has increased in response to the Settlement Agreement and new information.

Alternative A is the existing condition and reflects that other appropriated funding is used to supplement annual monitoring and five years trend monitoring. The impact has primarily been on the time and funding of wildlife, botany, and hydrology. There has been a marginal impact on time and funding of vegetation management, recreation, and special use administration.

The efficiency of Alternative B would limit the impact to other appropriated funding allowing for an increased ability to provide goods and services throughout all resource areas. Other appropriated funding would still be required for five year trend monitoring.

Alternative C has the lowest efficiency and is expected to have the greatest impact on the Forests' ability to provide goods and services throughout all resource areas. Significantly higher levels of other appropriated funding would be needed for annual monitoring and five years trend monitoring. Significant impacts are expected to the time and funding of wildlife, botany, hydrology, archeology, vegetation management, recreation, and special use administration.

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## CHAPTER 5. CONSULTATION AND COORDINATION

### Preparers and Contributors

The Forest Service consulted individuals, federal, state, and local agencies, tribes and non-Forest Service persons during the development of this SEIS.

### Interdisciplinary Team Members

The interdisciplinary team (IDT) is composed of representatives from each of the four southern California national forests, supported by additional staff from the Forest Service Enterprise Unit or through contract. Table 135 lists the team member's education and experience.

**Table 135. IDT members and key contributors**

Name	Education	Experience
David A. Austin	A.A. in General Education from Riverside City College, 1982; B.S. in Wildlife Management from Humboldt State University, 1986; post grad courses in Range Management - University of Wyoming 1997-98	Over 25 years of experience working in wildlife management with the California Department of Fish and Game, National Park Service, and Forest Service. Currently Forest Biologist on the San Bernardino National Forest.
Mark Borchert	Ph.D. in Ecology from the University of California, Davis, 1978	32 years as the vegetation and fire ecologist for Los Padres National Forest and later for the four southern Forests.
Chris Clervi	BA in Geography, Minor in Geology, UC Santa Barbara, 1999	13 years with the Forest Service as a Resource Information GIS technician, (primarily fisheries and biology), GIS Coordinator managing geospatial information for a Forest, and GIS analyst.
Fran Colwell	BS in Forest-Watershed Management, University of Arizona, 1977	35 years of experience working as a fire fighter, forester, recreation manager, visitor center director, national monument co-director and public uses staff officer at the district and forest level in Regions 2, 3, 5 and 6 of the Forest Service. Southern California national forest recreation and wilderness planner for the 2006 Forest Plan revision.
Robin Eliason	BA in Biology and English at Amherst College, M.S. in Wildlife at Southern Illinois University. Coursework completed for M.S. in botany at Southern Illinois University.	Independent wildlife biologist – 1988-1989. District Wildlife Biologist on the Mountaintop District of the San Bernardino National Forest 1989 - present.

Name	Education	Experience
Thomas Hall	BS in Forestry, Colorado State University MS in Forestry, Colorado State University	8 years with USDA Forest Service – 3 as Environmental Coordinator on San Bernardino National Forest 2 years with Colorado State Forest Service - Forester
Bob Hawkins	BS in Natural Resource Management, Humboldt State University, 1979; MS in Natural Resource Management, Humboldt State University, 1981	34 years of experience working as a hydrologist, lands specialist, winter sports specialist, recreation planner, hydropower and special uses regional coordinator, and natural resource planner for the Forest Service.
Jose Henriquez-Santos	BS in Landscape Architecture, California Polytechnic University Pomona, 2005	8 years of experience working as the Forest Landscape Architect for the Angeles National Forest
Jeff Heys	BS in Earth Systems, Stanford University, 1998 MS in Environmental Science, Alaska Pacific University, 2004.	12 years of experience in natural resource science, management, and planning with the Forest Service, National Park Service, and US Fish and Wildlife Service.
Kyle Kinports	BS in Environmental Science, Oregon State University, 2001	5 years of experience in recreation management, and 3 years of experience in ecosystem planning.
Deveree Kopp	Botanical and ecological studies at Seminole State College, Clemson University, and San Diego State University. Now attending Oregon State University	24 years of experience managing threatened, endangered and sensitive plant species and 22 years of experience in the development and management of ecological restoration programs on two southern California National Forests. Currently, botanist on the Mountaintop Ranger District of the San Bernardino National Forest.
Kenneth Kunert	BA in Landscape Architecture, Michigan State University, 1972	Over 35 years of experience working in landscape management and natural resource management in the private sector and for the Los Padres National Forest.
Mike McIntyre	BA in Anthropology, California State University, Northridge, 1974 MA in Anthropology, California State University, Northridge, 1979	32 years of experience working as an Archaeologist, and Forest Program Leads for Heritage Resources, Interpretive Services, and Tribal Relations for the Forest Service. Included is six years experience as Forest Line Officer.



Name	Education	Experience
Gary Montgomery	BS in Range Management, Humboldt State University, 1984	Over 35 years of experience with the Forest Service in rangeland management, resource management, and wildland fire and fuels management. Currently forest rangeland management specialist for the Los Padres National Forest.
Anne Poopatanapong	BS in Wildlife, Fish and Conservation Biology, UC Davis, 1997 MS in Biology, University of Nevada Reno, 2000	15 years experience working as a wildlife biologist for the Forest Service, Pacific Southwest Research Station (1997-2000) and San Bernardino National Forest (2000-current)
Justin Seastrand	BS in Geography, University of Utah, 2001	13 years of experience with the BLM and Forest Service in a variety of natural resource programs, including planning and NEPA, recreation, geographic information systems, fire, wilderness, special uses and rights of way.
Gloria Silva	BS in Forestry, Humboldt State University, 1982 MPIA, UC San Diego, 2002	33 years of experience working as a forester, land and resource management planner, District Ranger, and Forest Ecosystem and Planning Staff Officer.
Robert G. Taylor	BS in Environmental Hydrology, UC Davis, 1994 MS in Hydrology, New Mexico Institute of Mining and Technology, 1997	15 years professional experience in surface and groundwater hydrology, including Post-graduate Research Hydrologist with Idaho National Lab from 1997-1998 and Hydrogeologist with Idaho Department of Environmental Quality from 2000-2004. Forest Hydrologist, Water, Soils, Geology Program Manager on the San Bernardino National Forest from 2005 to present.
Diane Travis	BS in Forest Management with a concentration in Fire Science, Colorado State University, 1987	23 years in fuels management and fire planning on the Sequoia and Angeles National Forests
Julie E Tupper	B.S. Field Biology and Ecology, Seattle Pacific University, 1977 Graduate studies in Water Resource Engineering (Humboldt State Univ) and Geosciences (New Mexico Institute of Mining and Technology)	33 years professional experience in surface and groundwater hydrology in the private and government sector. Hydropower Team Member and Manager for R5 1999-2011

Name	Education	Experience
Darrell W. Vance	BA, Anthropology, University of Southern California , 1997; MA, Anthropology, California State University Northridge, 2000	12 years professional archaeological experience with the Forest Service.

### **Federal, State, and Local Agencies**

The Forest Service invited a broad range of federal, state and local agencies to participate as cooperators early in the process. Letters were sent in May 2011 to key federal and state agencies, as well as the Board of Supervisors and county planning departments for all nine affected counties. The Forest Service also hosted a conference call in June 2011 for interested agencies and tribal governments. Several of the agencies accepted the invitation to participate as cooperators as described in Chapter 1.

The scoping notice was also distributed to a wide range of federal, state, and local agencies in April 2012. Santa Barbara and San Diego Counties provided responses to the scoping notice. The Draft SEIS was widely distributed to federal, state, state, and local agencies in February 2013. Responses were received from 23 elected officials or agencies as described in Appendix 4.

The State of California has a keen interest in all aspects of the conservation and management of IRAs in national forests located within California (CA 2006). Under the 2005 “State Petition Rule”, California petitioned the Secretary of Agriculture to promulgate regulations protecting all 4.4 million acres of Inventoried Roadless Areas (IRAs) within the national forests in California. The Resources Agency worked closely with the Forest Service to implement interim guidelines that ensure roadless areas remain roadless in California during the period before a final California-specific roadless rule is promulgated. These guidelines were described in an April 2006 letter from Regional Forester Weingardt to Secretary Chrisman that outlined the approach the Forest Service would use to plan and approve projects proposed in roadless areas, with a commitment to consult with the state before making any key NEPA decisions.

The “State Petition Rule” was set aside by court order in 2006, and the 2001 Roadless Area Conservation Rule was reinstated in that same case (and later upheld in a separate lawsuit, see Chapter 2 for the full history). The Forest Service continues to consult with the Natural Resources Agency as needed for projects proposed in inventoried roadless areas. As an extension of that agreement, the Forest Service consulted with the Natural Resources Agency regarding this plan amendment during meetings held in September 2011, August 2012, and August 2013. The Natural Resources Agency is a cooperating agency for this plan amendment.

### **Tribes**

Tribal governments were invited to participate as cooperators by letter in May of 2011. They were also included in the mailing for the scoping notice. The Forest Service also has discussions with tribal leaders as part the ongoing government to government relationship.

## Distribution of the Environmental Impact Statement \_\_\_\_\_

Notice of the Final SEIS was distributed to all individuals, organizations, and agencies that provided comments during scoping or during the comment period, as well as those agencies included in the CEQ NEPA regulations at 40 CFR 1502.19. A digital copy of the Final SEIS was filed with the Environmental Protection Agency through the e-NEPA system.

The Final SEIS is being distributed in electronic format on the web at the [project website](#).

Digital (on DVD) or paper copies of the Final SEIS are available on request.

## Opportunity to Object \_\_\_\_\_

The Forest Service has adopted a pre-decisional administrative review process, more commonly referred to as an objection process, for plans, plan amendments, or plan revisions. This process gives an individual or entity an opportunity for an independent Forest Service review and resolution of issues before the approval of a plan, plan amendment, or plan revision.

The objection process is conducted pursuant to regulations at 36 CFR 219, Subpart B. Individuals and entities who have submitted substantive formal comments related to the plan amendment during the opportunities for public comment have standing to object. Issues raised in objections must be based on previously submitted comments unless based on new information arising after the designated comment period.

A draft Record of Decision for each forest plan amendment will be available in early 2014. Notices will be sent to all individuals with standing, and legal notices will be published simultaneously in the newspapers of record.

Objections must be submitted within 60 days following the publication of the legal notice in the newspaper of record for each forest. The newspapers of record are:

- Angeles – Los Angeles Times
- Cleveland – San Diego Union-Tribune
- Los Padres – Santa Barbara News Press
- San Bernardino – San Bernardino Sun

The date of the legal notice is the exclusive means for calculating the time to file an objection. Those wishing to object should not rely upon dates or timeframes provided by any other source. It is the objector's responsibility to ensure evidence of timely receipt (36 CFR 219.56(c)).

More information about the objection process will be included in the notice distributed at the start of the objection period.

## Informational Meetings \_\_\_\_\_

The Forest Service held multiple open house workshops during the comment period for the Draft SEIS. The meeting times and locations were:

March 26, 2013, 4:00 PM to 7:00 PM, Angeles National Forest Headquarters, 701 North Santa Anita Avenue, Arcadia, CA 91006

March 26, 2013, 4:00 PM to 7:00 PM, Descanso Ranger District Office, 3348 Alpine Blvd, Alpine, CA 91901

March 27, 2013, 4:00 PM to 7:00 PM, Palomar Ranger District Office, 1634 Black Canyon Road, Ramona, CA 92065

March 28, 2013, 4:00 PM to 7:00 PM, Santa Clara Mojave Rivers Ranger District Office, 33708 Crown Valley Road, Acton, CA 93510

March 28, 2013, 5:00 PM to 7:30 PM, San Bernardino National Forest Headquarters, 602 S. Tippecanoe Ave., San Bernardino, CA 92408

April 9, 2013, 4:00 PM to 7:00 PM, Mt. Pinos Ranger District office, 34580 Lockwood Valley Road, Frazier Park, CA 93225

April 10, 2013, 4:00 PM to 7:00 PM, Southern California Edison, 103 David Love Place, Goleta, CA 93117 (Hosted by Los Padres National Forest)

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## Geospatial Information

Geospatial information used in the analysis was obtained from several different sources, and offers the best geospatial representation for the various resources available at the time of publication. There are some differences in datum's and projections between the sources, however, any differences were consistent between the alternatives, and the analysis accurately compares the differences between alternatives. GIS files for the land use zone alternatives may be requested by sending an email to [socal\\_nf\\_lmp\\_amendment@fs.fed.us](mailto:socal_nf_lmp_amendment@fs.fed.us).

Public sources of geospatial information include the following:

- California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP). <http://frap.fire.ca.gov/data/frapgisdata/download.asp?rec=fire>
- U. S. Department of Agriculture, Forest Service. National Land Status Record System.  
<http://fsgeodata.fs.fed.us/vector/lrsr.php>

U. S. Department of Agriculture, Forest Service. Region 5 Geospatial Clearing House.  
<http://prdp2fs.ess.usda.gov/main/r5/landmanagement/gis>

U.S. Department of Interior, Fish and Wildlife Service. Critical habitat portal  
<http://criticalhabitat.fws.gov/>

Wilderness.net. <http://www.wilderness.net/NWPS/geography>

## INDEX

Agency Preferred Alternative .....	20	Minerals and Energy .....	113
Air .....	85, 222, 292	Monitoring .....	127, 304
Alaska National Interest Lands Conservation Act .....	278	Motorized Trails.....	109
Alternatives Considered in Detail.....	15	National Forest Management.....	122
Analysis assumptions.....	135	Non-Motorized Trails.....	108
Background.....	2	Non-Recreation Special Uses .	116, 272, 302
Biological Resources.....	44, 149	Other Plans.....	123, 284
Border security.....	105	Other Required Disclosures .....	303
Botanical Resources.....	60, 180, 290	Private Lands .....	118, 278, 302
climate change .....	46, 290, 332	Public Involvement .....	4
Cooperating Agencies .....	12	Purpose and Need for Action.....	3
Critical Biological Zones.....	58	Recreation .....	91, 231, 294
Cumulative Effects.....	287	Research Natural Areas .....	57
Decision Framework.....	4	Road and Trail Maintenance.....	110, 260
Economic Efficiency.....	286, 318	Roadless Area Conservation Rule....	20, 135, 251
Economics .....	250, 303	Roads .....	106
Fire History.....	119	Roads and Trails.....	251, 301
Fire Suppression effectiveness in IRAs, including WUI .....	279	Scenic Integrity Objectives.....	103
Fuels Management .....	281	Sensitive Plant Species .....	63
Heritage Resources .....	86, 225, 293	Short-term Uses and Long-term Productivity .....	285
Impact on Local Fire Cooperators .....	283	Special Interest Areas .....	86, 223
Interdisciplinary Team Members.....	321	Suppression Effectiveness and Firefighter Access .....	121
Invasive Non-native Species ....	69, 210, 291	Travel management.....	106, 110
Irreversible and Irrecoverable Commitments of Resources.....	286	Tribal and Native American Interests .....	88, 228, 294
Issues .....	5	Unavoidable Adverse Effects .....	286
Landscape Management.....	100, 244, 301	Vegetation Conditions .....	44, 149
Law Enforcement.....	104, 248, 301	Watershed .....	79, 216, 292
Livestock Grazing.....	110, 261, 301	Wild and Scenic Rivers .....	98, 238
Minerals.....	264, 302		

Wilderness ..... 97, 241, 295  
Wildfire ..... 303  
Wildland/Urban Interface ..... 120

Wildlife ..... 48, 150, 290  
Wildlife Improvements.....57

## LIST OF ACRONYMS

BA – Biological Assessment  
BCMUR- Back Country Motorized Use Restricted  
BCNM- Back County Non-Motorized  
BE – Biological Evaluation  
BLM- Bureau of Land Management  
CAA- Clean Air Act  
CBZ- Critical Biological Zone  
CDFW- California Department of Fish and Wildlife  
CFR – Code of Federal Regulations  
CWA- Clean Water Act (federal)  
DAI- Developed Area Interface  
EPA- Environmental Protection Agency  
ESA – Endangered Species Act  
EW- Existing Wilderness  
FS- Forest Service  
GAMA- Groundwater Ambient Monitoring and Assessment  
GDE- Groundwater-Dependent Ecosystems  
HUC- Hydrologic Unit Code  
IDT- Interdisciplinary Team  
INFRA – Infrastructure database  
IRA- Inventoried Roadless Area  
LMP – Land Management Plan (used interchangeably with “Forest Plan”)  
LUZ- Land Use Zone  
MIS – Management Indicator Species  
MUVN- Motor Vehicle Use Map  
NEPA – National Environmental Policy Act  
NFS- National Forest System  
PCE- Primary Constituent Elements  
R5- Region 5 of the Forest Service  
RACR – Roadless Area Conservation Rule  
RCA- Riparian Conservation Areas

RDM- Residual Dry Matter

RW- Recommended Wilderness

SUDS – Special Uses Data System

TES(PC) – Threatened, Endangered, Sensitive, (Proposed, Candidate) Species

WCC- Watershed Condition Class

US FWS/ FWS- US Fish and Wildlife Service

USDI- United States Department of Interior

## **APPENDICES**

(Available online at the project website.)

**Appendix 1 – Maps of the Land Use Zone Alternatives**

**Appendix 2 – Inventoried Roadless Area Analyses**

**Appendix 3 – Monitoring Alternatives**

**Appendix 4 – Response to Comments**